Post P.G. Diploma in Environmental Studies (Semester scheme)

2016-17 I SEMESTER

Post P.G. Diploma in Environmental Studies is divided into two semesters. There are Six theory papers and two practicals in each semester. Grades will be awarded as per norms considered for faculty of science.

Eligibility for admission:

Masters Degree in Science, Medicine, Engineering, Law (with B.Sc.) with at least 50% in aggregate (45% for SC and ST candidates).
### Post P.G. Diploma in Environmental Studies

**1st Semester** 2016

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Subject Code</th>
<th>Course Title</th>
<th>Course Category</th>
<th>Credit</th>
<th>Contact hours per week</th>
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<tr>
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<td>DES 701</td>
<td>Fundamentals of Ecology</td>
<td>CCC</td>
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<td>DES 702</td>
<td>Natural Resources</td>
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<td>DES 703</td>
<td>Environmental Pollution</td>
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<td>Core Lab</td>
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<td>5.</td>
<td>DES A01</td>
<td>Elective-1 Environmental impact Assessment (EIA)</td>
<td>ECC</td>
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<tr>
<td>6.</td>
<td>DES A02</td>
<td>Elective-2 Environment Management and Planning</td>
<td>ECC</td>
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<td>7.</td>
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<td>Elective-3 Disaster Management</td>
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Signature: [Signature]

Date: 20.10.2016
Post P.G. Diploma in Environmental Studies

Semester-I

Note: Each paper will have five questions. Questions No. 1 containing short answer type questions from the entire syllabus and will be compulsory.

DES 701: Fundamentals of Ecology 60 Hours

History of Ecology and Environmental Science, Historical development of ecology, Ecological principles.
Concept of an Ecosystem, Ecological pyramids, Ecological amplitudes, and Ecological niches.
Structure and Function of an Ecosystem, Food Chain, Food Web, Trophic levels, Ecological energetic, Flow of energy, Biogeochemical cycling.

DES 702: Natural Resources 60 Hours

Non-renewable resources, Their availability, distribution and economics.
Renewable Resources, Distribution, rate of depletion and imbalances.
Methods and Policies of Conservation of Natural resources and wildlife, WWF and CITES.

DES 703: Environmental Pollution 60 Hours

Air pollution: Types of air pollutants, sources of air pollution, methods of detection and effects of air pollution.
Water Pollution: Types of water pollutants, sources and impacts of water pollution.
Land Pollution: Sources and adverse impacts on Environment and human health
Noise Pollution: Sources and impacts, Radiation Pollution; Sources and Impacts, Space pollution; sources and impacts.

20/10/2016
DES 711: Core Lab based on theory papers

Elective-1

DES A01: Environmental Impact Assessment (EIA) 60 Hours

Introduction, aims and objectives of EIA, Procedures of EIA, in different countries, methodologies of EIA. Cost benefit analysis.

EIA of Thermal Power and Nuclear Power Plants. (15 Hours)

EIA of Chemical Industries, Steel industries, Paper and pulp industries and distilleries. (15 Hours)

EIA of Mining, EIA of River Valley projects and major harbours. (15 Hours)

Elective-2

DES A02: Environmental Management and Planning 60 Hours

Introduction to environmental management system (EMS): Goals ISO 14000 and ISO 14001. (15 Hours)

Air pollution Control Technologies, Water Pollution control Technologies. (15 Hours)

Impact of use and production of Energy and Mitigations. (15 Hours)

Waste; Generation, Sources and types Solid Waste management, Toxic and Hazardous Waste management. (15 Hours)

Elective-3

DES A03: Disaster Management 60 Hours

Earth’s process and disaster, Concepts of Hazard, Vulnerability, Risks. Types of Disasters, Causes and effects. (15 Hours)


Disaster Cycle, Phases of Disaster, Disaster Risk Reduction. Disaster Preparedness, Disaster Mitigation. (15 Hours)

National Policy on Disaster Management (NPDM), Institutional and Legal Arrangements. International Decade for Natural Disaster Reduction (IDNDR), Policy for disaster reduction. (15 Hours)

DES A11: Practicals based on theory papers

[Signature]

20/10/2016
Post P.G. Diploma in Human Ecology (Semester Scheme)

2016-17 I SEMESTER

Post P.G. Diploma in Human Ecology is divided into two semesters. There are Five theory papers and One field study in each semester. Grades will be awarded as per norms considered for faculty of science.

Eligibility for Admission

Masters Degree in Social Science, Science, Medical Science, Engineering, Law with atleast 50% marks (45% for SC and ST candidates).

20-10-2016

Signature
### Post P.G.Diploma in Human Ecology

**1st Semester**  
Exam December 2016

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<td>DHE 701</td>
<td>Man and Environment</td>
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<td>DHE 702</td>
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<td>CCC</td>
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<td>3.</td>
<td>DHE 703</td>
<td>Technological Revolution</td>
<td>CCC</td>
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<td>DHE A01</td>
<td>Elective-1 Natural Resources</td>
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<td>DHE A02</td>
<td>Elective-2 Development and Environment</td>
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<td>DHE A11</td>
<td>Elective-3 Field Studies in lieu of 3rd Elective paper</td>
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</table>
Post P.G. Diploma in Human Ecology

Semester-I

Note: Each paper will have five questions. Questions No.1 containing short answer type questions from the entire syllabus and will be compulsory.

DHE 701: Man and Environment 80 Hours

The natural and the built environment of man, attempt to modify environment, impact of human activity on environment

Human diseases resulting from environmental degradation: Air, Water, Noise and Radiation Pollution, Hazardous waste accumulation.

Human genetics and heredity, role of heredity and environment in human growth and development.

Cultural evolution of man and the impact of human culture on the environment, role of faith and beliefs and tradition in ecosystem preservation. Modernization, Consumerism and extravagant life style and their effect on environment.

DHE 702: The Human Ecosystem 80 Hours

Fundamentals of Ecology, ecological principles and factors determining survival of life on earth. The concept of Global ecological balance and threats of its imbalances due to rising human population.

The urban ecosystem and its relationship with the rural ecosystem urban human ecosystem as highly energy intensive and unsustainable. Strategies for sustainable urbanization.

The rural ecosystem as ecologically more sustainable development. rural development an ecological necessity. Ecology of forest dwellers. The ‘tribals’ of India.

Quality of life in the rural and urban areas. Environmental problems arising from the rapid urban development.
DHE 703: Technological Revolution

Industrialization, Motorization and Farmization, their positive and negative impacts on man and environment. Eco-farming, Eco-housing and Eco-automobiles.

Green Revolution, its economical and ecological consequences.

Environmental principles of 3R: Waste reduction, waste recycle, waste reuse and recovery.

Technological and Development disasters and their impact on Human ecology, construction of big dams and highways and their environmental consequences.

80 Hours

Elective-1

DHE A01: Natural Resources

Classification of natural resources, Renewable and Non-renewable resources their availability and distribution.

Solar Energy, Wind energy, Geothermal energy, Hydroelectricity and Tidal energy.

Hydrogen as fuel, Biomass energy

Need for judicious conservation and consumption of natural resources. Ecological problems involved in the harnessing of resources for human development.

80 Hours
Elective-2

DHE A02:  Development and Environment  80 Hours

The dilemma of human development, economic development vis-a-vis ecological destruction. Need for a balance between economy and ecology. (20 Hours)

The ecological and moral principles in development, Gandhian ideology of development, Equitable development Preliminary aspects of Environmental impact assessment (EIA) and social impact assessment. Corporate Social Responsibilities. (20 Hours)

The Brundtland commission report on “Our common future” (1987) and concept of sustainable development. Agenda 21. (20 Hours)

Elective-3

DHE A11:  Field Studies in lieu of 3rd Elective paper

20/10/2016
INDIRA GANDHI CENTRE FOR HUMAN ECOLOGY, ENVIRONMENTAL AND POPULATION STUDIES,
UNIVERSITY OF RAJASTHAN, JAIPUR-302004

Post P.G. Diploma in Population Studies (Semester scheme)

2016-17  I SEMESTER

Post P.G. Diploma in Population Studies is divided into two semesters. There are Five theory papers and One Field study in each semester. Grades will be awarded as per norms considered for faculty of science.

Eligibility for admission:

Master degree in Social Science, Science, Medical Science, Engineering, Law with at least 50% Marks (45% for SC and ST candidates).

20.10.2016
# Post P.G. Diploma in Population Studies

**1st Semester**  Exam December 2016

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<td>DPS 701</td>
<td>The Ecology of Human Population</td>
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<td>DPS 702</td>
<td>Population Growth and Resource Development</td>
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<td>3.</td>
<td>DPS 703</td>
<td>Population Control, Planning and Policies</td>
<td>CCC</td>
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<td>DPS A02</td>
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<td>ECC</td>
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Signature: [Signature]

Date: 20.10.2016
Post P.G. Diploma in Population Studies

Semester-I

DPS 701: The Ecology of Human Population 80 Hours

Ecology and the concept of human ecosystem; components of ecosystem; role of human beings in the global ecosystem; human food chain. Growing human population - a threat to the global ecological balance; ecological factors affecting human existence on earth.

(20 Hours)

The human "Population bomb" impact of growing human population of the life support systems of Earth e.g. air, water, land soil flora and fauna. Ecological Pyramids of number and biomass and the impact of human population explosion on the global ecosystem; relationship between population, poverty and pollution; Impact of population on human health and environmental sanitation.

(20 Hours)

Current trends of population growth; population distribution, density and composition; population projections for the future; rural and the urban population and quality of life, migration of population-causes and consequences.

(20 Hours)

Determinants of fertility and mortality, indicators of fertility, measurements of morality, life expectancy and longevity; crowding behavior-social and psychological aspects. Human genetics, blood groups and Rh factors, fitness characteristics; meological adaptions; genetical adaptions among primitive human societies (tribal population). Heterosis; inbreeding depression; social factors promoting hybridization, genetical disorders among human population; behavioral genetics.

(20 Hours)

DPS 702: Population Growth and Resource Development 80 Hours

Status of world human population: developing and the developed nations and their population problems; Population growth, economic development and the quality of life in the developing and the developed countries: Population growth curves of human beings and other species on earth.

(20 Hours)

Growth of population in India-prc and post independence scenario; sex ratio; distribution of Population in India and the Population density.

(20 Hours)

Ecology Vs Economy-the concept of sustainable development with regard to growing human population; socio-economic impact of population explosion and their ecological consequences.

(20 Hours)

The finite natural resources(minerals and materials)of earth vis-a-vis the infinitely growing human population, the world food resources vis-a-vis the growing human population quality of food, malnutrition and deficiency diseases with special references to the developing countries. The

(20 Hours)
Elective-2

DPS A02: Social Impact Assessment and Sustainable Development 80 Hours

Economic Traits of Population: Economically active and inactive Population, employment status (unemployment, under employment and labour absorption), work force, occupation, structure, income and expenditure.

Technological Revolution: Industrialization, Farmization, Urbanization, meaning of urbanization, determinants of urbanization, urbanization in India, world urbanization.

Sustainable Development: The Brundland Commission Report (1987) about sustainable development, the strategies for sustainable industrialization, sustainable agriculture, sustainable urbanization and sustainable transport system, developmental philosophy based on human needs and not greed Gandhian philosophy of development.

Eco-politics and Development: Politics and environment, the North and South ecopolitical divide on the issues of environment and development, national and international politics on the course of development and environment, role of politician, legislature, and constitution in environment and development.

Elective-3

DPS A11: Field Studies in lieu of 3rd Elective paper