

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

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

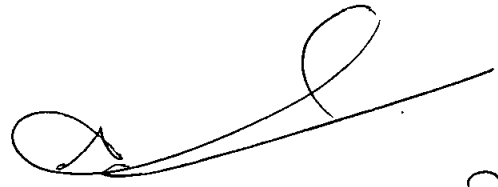
2016-17

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:

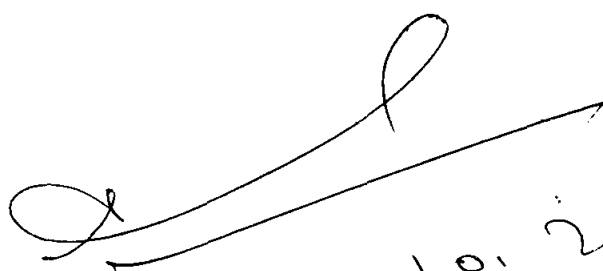
Masters Degree in Science, Medicine, Engineering, Law (with B.Sc.) with at least 50% in aggregate (45% for SC and ST candidates).


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Post P.G.Diploma in Environmental Studies

1st Semester Exam December 2016

S.No.	Subject code	Course Title	Course category	Credit	Contact hours per week		
					Lecture	Tutorial	Practical
1.	DES 701	Fundamentals of Ecology	CCC	4	4	0	0
2.	DES 702	Natural Resources	CCC	4	4	0	0
3.	DES 703	Environmental Pollution	CCC	4	4	0	0
4	DES 711	Core Lab	CCC	6	0	0	6
5	DES A01	Elective-1 Environmental impact Assessment (EIA)	ECC	4	4	0	0
6	DES A02	Elective-2 Environment Management and Planning	ECC	4	4	0	0
7	DES A03	Elective-3 Disaster Management	ECC	4	4	0	0
8	DES A11	Elective Lab	ECC	6	0	0	6
		Total		36	24	0	12


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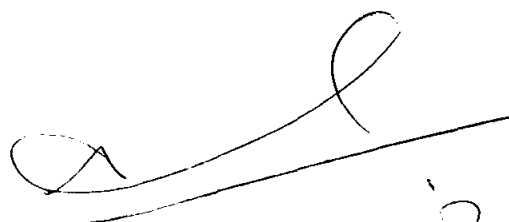
Post P.G. Diploma in Environmental Studies

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.	(15 Hours)
Organism–Environment Interaction, Commensalism, Amensalism, Mutualism, Parasitism, Predation, Symbiosis.	(15 Hours)
Concept of an Ecosystem, Ecological pyramids, Ecological amplitudes, and Ecological niches.	(15 Hours)
Structure and Function of an Ecosystem, Food Chain, Food Web, Trophic levels, Ecological energetic, Flow of energy, Biogeochemical cycling.	(15 Hours)
DES 702: Natural Resources	60 Hours
Non-renewable resources, Their availability, distribution and economics.	(15 Hours)
Renewable Resources, Distribution, rate of depletion and imbalances.	(15 Hours)
Wildlife Resources-Necessity of Wildlife, State of Wildlife in India, National Parks, Sanctuaries, Biosphere Reserves and Tiger Projects.	(15 Hours)
Methods and Policies of Conservation of Natural resources and wildlife, WWF and CITES.	(15 Hours)
DES 703: Environmental Pollution	60 Hours
Air pollution: Types of air pollutants, sources of air pollution, methods of detection and effects of air pollution.	(15 Hours)
Water Pollution: Types of water pollutants, sources and impacts of water pollution.	(15 Hours)
Land Pollution: Sources and adverse impacts on Environment and human health	(15 Hours)
Noise Pollution: Sources and impacts, Radiation Pollution; Sources and Impacts, Space pollution; sources and impacts.	(15 Hours)

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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.	(15 Hours)
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

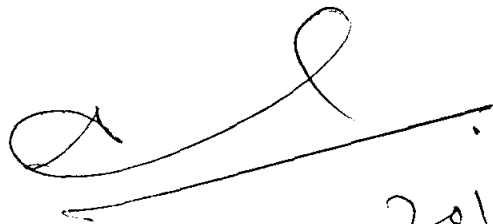
DES A02: Environmental Management and Planning	60 Hours
Introduction to environmental management system (EMS): Goals ISO 14000 and ISO 14001.	(15 Hours)
Air pollution Control Technologies, Water Pollution control Technologies	(15 Hours)
Impact of use and production of Energy and Mitigations.	(15 Hours)
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)
Geological Disasters: Earthquakes, Volcanic Eruption, Landslides; Wind and Water Related Natural Disaster: Floods and Flash Floods, Droughts, Cyclones, Tsunamis, Man-Made Disasters.	(15 Hours)
Disaster Cycle, Phases of Disaster, Disaster Risk Reduction, Disaster Preparedness, Disaster Mitigation.	(15 Hours)
National Policy on Disaster Management (NPDMD), Institutional and Legal Arrangements. International Decade for Natural Disaster Reduction (IDNDR), Policy for disaster reduction.	(15 Hours)

DES A11: Practicals based on theory papers

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Post P.G. Diploma in Human Ecology (Semester Scheme)

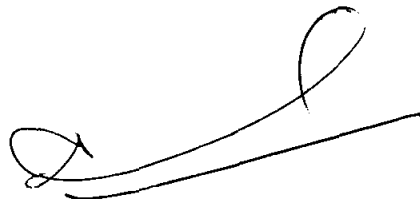
2016-17

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).

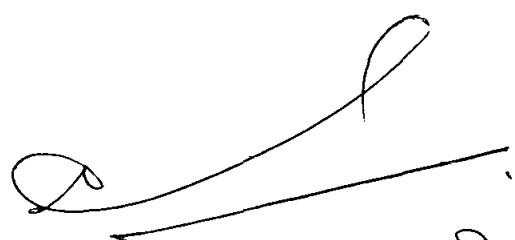

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Post P.G.Diploma in Human Ecology

Ist Semester Exam December 2016

S.N.	Subject code	Course Title	Course category	Credit	Contact hours per week		
					Lecture	Tutorial	Pract
1.	DHE 701	Man and Environment	CCC	6	6	0	0
2.	DHE 702	The Human Ecosystem	CCC	6	6	0	0
3.	DHE 703	Technological Revolution	CCC	6	6	0	0
4	DHE A01	Elective-1 Natural Resources	ECC	6	6	0	0
5	DHE A02	Elective-2 Development and Environment	ECC	6	6	0	0
6	DHE A11	Elective-3 Field Studies in lieu of 3 rd Elective paper	ECC	6	0	0	6
		Total		36	30	0	6


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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 (20 Hours)

Human diseases resulting from environmental degradation: Air, Water, Noise and Radiation Pollution, Hazardous waste accumulation. (20 Hours)

Human genetics and heredity, role of heredity and environment in human growth and development. (20 Hours)

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. (20 Hours)


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. (20 Hours)

The urban ecosystem and its relationship with the rural ecosystem urban human ecosystem as highly energy intensive and unsustainable. Strategies for sustainable urbanization. (20 Hours)

The rural ecosystem as ecologically more sustainable development. rural development an ecological necessity. Ecology of forest dwellers. The 'tribals' of India. (20 Hours)

Quality of life in the rural and urban areas. Environmental problems arising from the rapid urban development. (20 Hours)


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DHE 703: Technological Revolution

80 Hours

Industrialization, Motorization and Farmization, their positive and negative impacts on man and environment. Eco-farming, Eco-housing and Eco-automobiles. **(20 Hours)**

Green Revolution, its economical and ecological consequences. **(20 Hours)**

Environmental principles of 3R: Waste reduction, waste recycle, waste reuse and recovery. **(20 Hours)**

Technological and Development disasters and their impact on Human ecology, construction of big dams and highways and their environmental consequences. **(20 Hours)**

Elective-1

DHE A01: Natural Resources

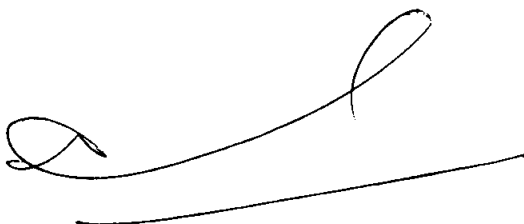
80 Hours

Classification of natural resources, Renewable and Non-renewable resources their availability and distribution. **(20 Hours)**

Solar Energy, Wind energy, Geothermal energy, Hydroelectricity and Tidal energy. **(20 Hours)**

Hydrogen as fuel, Biomass energy **(20 Hours)**

Need for judicious conservation and consumption of natural resources. Ecological problems involved in the harnessing of resources for human development. **(20 Hours)**


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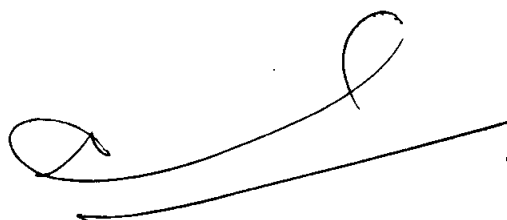
Post P.G. Diploma in Population Studies (Semester scheme)

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).

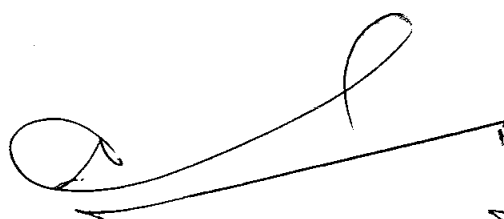

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Post P.G.Diploma in Population Studies

1st Semester Exam December 2016

S.N.	Subject code	Course Title	Course category	Credit	Contact hours per week		
					Lecture	Tutorial	Practi
1.	DPS 701	The Ecology of Human Population	CCC	6	6	0	0
2.	DPS 702	Population Growth and Resource Development	CCC	6	6	0	0
3.	DPS 703	Population Control, Planning and Policies	CCC	6	6	0	0
4	DPS A01	Elective-1 The Human Population and Environment	ECC	6	6	0	0
5	DPS A02	Elective-2 Social Impact Assessment and Sustainable Development	ECC	6	6	0	0
6	DPS A11	Elective-3 Field Studies in lieu of 3 rd Elective paper	ECC	6	0	0	6
		Total		36	30	0	6


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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; (20 Hours)
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.

The human "Population bomb" impact of growing human population of the (20 Hours)
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.

Current trends of population growth; population distribution, density and (20 Hours)
composition; population projections for the future; rural and the urban population and quality of life, migration of population-causes and consequences.

Determinants of fertility and mortality, indicators of fertility, measurements (20 Hours)
of morality, life expectancy and longevity; crowding behavior-social and psychological aspects. Human genetics, blood groups and Rh factors, fitness characteristics; meecological adaptions; genetical adaptions among primitive human societies (tribal population). Heterosis; inbreeding depression; social factors promoting hybridization, genetical disorders among human population; behavioral genetics.


DPS 702: Population Growth and Resource Development

80 Hours

Status of world human population; developing and the developed nations (20 Hours)
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.

Growth of population in india-prc and post independence scenario; sex (20 Hours)
ratio; distribution of Population in India and the Population density.

Ecology Vs Economy-the concept of sustainable development with regard (20 Hours)
to growing human population;socio-economic impact of population explosion and their ecological consequences.


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The finite natural resources(minerals and materials)of earth vis-a-vis the (20 Hours)
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

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. (20 Hours)

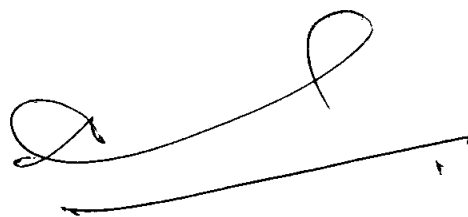
Technological Revolution: Industrialization, Farmization, Urbanization, meaning of urbanization, determinants of urbanization, urbanization in India, world urbanization. (20 Hours)

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. (20 Hours)

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. (20 Hours)

Elective-3

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


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