University of Rajasthan
Jaipur

SYLLABUS

POST P.G. DIPLOMA IN
ENVIRONMENTAL STUDIES

2016
Post P.G. Diploma in Environmental Studies
(2015-2016)
Post P.G. Diploma in Environmental Studies will be divisible into two semesters. There will be 4 papers in each semester. In all there will be 8 papers including practicals. 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 atleast 50% in aggregate (45% for SC and ST candidates).
### Post P.G. Diploma in Environmental Studies

#### 1st Semester

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<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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<tbody>
<tr>
<td></td>
<td>DES 101</td>
<td>Fundamentals of Ecology</td>
<td>CCC</td>
<td>8</td>
<td>L 6 T 2 P 0</td>
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<td></td>
<td>DES 102</td>
<td>Natural Resources</td>
<td>CCC</td>
<td>8</td>
<td>L 6 T 2 P 0</td>
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<td></td>
<td>DES 103</td>
<td>Environmental Pollution</td>
<td>CCC</td>
<td>8</td>
<td>L 6 T 2 P 0</td>
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<td>DES 111</td>
<td>Practicals</td>
<td>CCC</td>
<td>12</td>
<td>L - T 18</td>
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#### 2nd Semester

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<th>Contact Hours Per Week</th>
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<tr>
<td></td>
<td>DES 201</td>
<td>Diversity of Ecosystems</td>
<td>CCC</td>
<td>8</td>
<td>L 6 T 2 P 0</td>
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<tr>
<td></td>
<td>DES 202</td>
<td>Environmental Impact Assessment (EIA)</td>
<td>CCC</td>
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<td>L 6 T 2 P 0</td>
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<td></td>
<td>DES 203</td>
<td>Environment Management and Planning</td>
<td>CCC</td>
<td>8</td>
<td>L 6 T 2 P 0</td>
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<tr>
<td></td>
<td>DES 211</td>
<td>Practicals</td>
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<td>L - T 18</td>
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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 101:  Fundamentals of Ecology


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

DES 102: Natural Resources

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

DES 103: Environmental Pollution
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.

DES 111: Practicals based on theory papers
Note: Each paper will have five questions. Questions No.1 containing short answer type questions from the entire syllabus and will be compulsory.

**DES 201 : Diversity of Ecosystems**

Forest Ecosystem; Types and conservation, Distribution and Productivity of Forests, Conservation Policies and Acts.

Grassland; Grassland ecosystems, types, distribution and productivity in grassland ecosystems.

Desert; Desert ecosystems (Hot and Cold) distribution, productivity, and adaptations.

Aquatic ecosystem; fresh water, estuaries and marine ecosystem.
Note: Each paper will have five questions. Questions No.1 containing short answer type questions from the entire syllabus and will be compulsory.

DES 202 : Environmental Impact Assessment (EIA)

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.

EIA of Chemical Industries, Steel industries, Paper and pulp industries and distilleries.

EIA of Mining, EIA of River Valley projects and major harbours.

24/11/2014
Note: Each paper will have five questions. Questions No.1 containing short answer type questions from the entire syllabus and will be compulsory

DES 203 : Environmental Management and Planning

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

Air pollution Control Technologies, Water Pollution control Technologies

Impact of use and production of Energy and Mitigations.

Waste; Generation, Sources and types Solid Waste management, Toxic and Hazardous Waste management.

DES 211 : Practicals based on theory papers
Suggested Readings:


State of the world. World watch Institute Annual Reports.


Managing Solid Wastes in Developing Countries. Holmes, J.R. 1984 John Wiley and Sons, New York, USA.


