

# **Regulations and Syllabus**

*For*

**POST GRADUATE DIPLOMA  
IN  
“Environmental Impact Assessment”  
(PGDEIA)**



*Offered by*

**DEPARTMENT OF ZOOLOGY  
NEHRU GRAM BHARTI VISHWAVIDYALAYA,  
KOTWA-JAMUNIPUR-DUBAWAL  
ALLAHABAD-221505  
From 2017 – 2018**

# **Regulations and Syllabus**

**(Effective from Academic Year 2017-18 onwards)**

## **Postgraduate Diploma in Environmental Monitoring and Impact Assessment (PGDEMIA)**

Apart from regular courses, the Department of Zoology offers a **Postgraduate Diploma in Environmental Monitoring and Impact Assessment (PGDEMIA)** through regular mode. Our endeavour is to provide the best quality education in both conventional and applied Diploma courses.

### **Objective**

This course has been designed to develop trained manpower for research institutions, universities and industries in the area of environmental monitoring, environmental impact assessment, environmental health protection and evaluation of damage to ecology.

### **The Course**

Highlights of the course are described below:

#### **Name of the course**

PG Diploma in Environmental Monitoring and Impact Assessment (PGDEMIA)

**Nature:** Regular Mode

**Medium of instruction and examination** English

#### **Eligibility for admission**

Candidates for admission to the PGDEMIA course shall have passed Bachelor of Science degree (B.Sc.). The employees of Government, private sector and NGO (s) are also eligible through proper channel.

#### **Duration of the course**

The duration of the PGDEMIA course shall be for a period of one year (2 semesters). The total number of contact classes shall be 360 hours. Examinations will be conducted after the end of each semester.

**Course of study**

The Course of study shall contain the subjects as defined in further sections.

**Number of seats:** 15

**Fee Structure**

Rs. 5,000/- per semester (Extra Rs. 10,000/- per semester for sponsored candidates)

**Job Opportunities:**

Zoological Survey of India (ZSI) Kolkata, Fishery Survey of India (FSI), Mumbai, CIFRI, Barrackpore, Central Water Pollution control Board (CPCB), New Delhi, World Wide Fund, New Delhi, NABET New Delhi, Environmental Consultation company and Projects of Aquatic Division from various Research Centres and Universities of India and many more.

**Commencement of the course**

January/February of every year

**Mode of admission** As per the norms prescribed by N.G.B. Vishwavidyalay from time to time

**Period of completion** Not more than 01 years

**Duration of the Programme** (Minimum: 1 year; Maximum: 2 years)

To fulfill the requirements for the award of P.G. Diploma in Environmental Monitoring and Impact Assessment, a student may clear all the papers in one year. If a student fails in one or more paper(s), he/she will have to re-appear for supplementary examination, which will be conducted alongwith the terms-end examination of the subsequent batch. Students will have to clear all papers in a maximum period of two years after admission. After expiry of two years, they shall have to seek fresh admission.

**The Curriculum**

Highlights of the curriculum of PG Diploma in Environmental Monitoring and Impact Assessment are as follows:

**Examination**

The participants will be undergoing a continuous assessment throughout his/her period of study. The evaluation will consist of internal examinations and external examinations for each paper based on the specific requirements of the respective paper.

**(A) Evaluation systems and question papers**

There will be three methods of evaluation

**a.** The Internal Assessment conducted by the Department.

**b.** The External examination conducted by the university at the end of semester for each paper concerned.

**c.** Lab course /Project evaluation consisting of Viva-voce which would be conducted by the Department.

**a) Internal Assessment**

Internal Assessments conducted for all the papers shall have 40 marks out of 100 marks.

Tests conducted in the Institute (Sessional Exam) - 20 marks

Class Attendance / Group Discussion - 15 marks

Assignments - 05 marks

**b) External Examination**

The External examination shall be conducted by the University. Its score shall be 60 marks out of 100 Marks. The pattern of question papers will be as follows:

**Section A:** Objective type with multiple choices (20 questions; 4 from each unit) - 20%

**Section B:** Short answer question of either or type (10 questions; 2 from each unit) - 40%

**Section C:** Essay type question of either or type (5 questions; 1 from each unit) - 40%

**c) Project evaluation**

Each project work will have an Internal and Continuous Assessment - 40%

Term end evaluation will contain two components:

Viva-voce examination - 30%

Dissertation evaluation - 30%

Total - 100%

**Counseling Hours for Theory**

**Papers:** 16 hours per theory paper

**Practical Sessions** 5 sessions of 4 hours each for a laboratory course

**Attendance** 75% attendance is compulsory in practical (lab courses) for appearing in the examination.

**Course Structure**

Semester-wise course structure is given below:

### First Semester

S. No.	Paper code	Name of the papers	Total Marks
01.	PGDEIA 101	Introduction and principles of EIA	100
02.	PGDEIA 102	Methods and Practice of EIA	100
03.	PGDEIA 103	Public participation and Management of EIA	100
04.	PGDEIA 104	Public participation and Management of EIA	100
05.	PGDEIA 105	Lab Course –	100
		Grand Total	500

### Second Semester:

S. No.	Paper code	Name of the papers	Total Marks
01.	PGDEIA 201	Planning and Policies in EIA	100
02.	PGDEIA 202	Biodiversity and Applications of Computers in EIA	100
03.	PGDEIA 203	Hydrology and Monitoring of Habitats	100
04.	PGDEIA 204	Air & Soil Quality and Climate Change	100
05.	PGDEIA 205	Lab Course – II/ (Lab work+ Project work based on field visit)	100 (50+50)
		Grand Total	500

### Counseling and Examination

For the purpose of Counseling, each academic year shall consist of two Academic Semesters, i.e. the first semester (January-June).and the second semester (July-December).

- (i) Mode (Theory papers) Written only (Lab course) Practical work and viva-voce.
- (ii) Duration (Theory papers) 03 hours (Lab course) 04 hours
- (iii) Examiners (Theory papers) Paper-setters and evaluaters to be decided by the University for each paper from time to time.

Lab course examination:

The University will appoint External Examiners for each lab course.

### Award of Division to Successful Students

The students shall be declared successful on securing 40% of the maximum marks in each paper and awarded division on the basis of the percentage of aggregate marks obtained in all the subjects, as per the following criteria. 75% or above Distinction; 60% or above; 1st division; 50% or above but less than 60% marks 2nd division; 40% or above but less than 50% marks 3rd division; Less than 40 % Fail.

## **Details of the syllabus**

The course of PGDEMIA is divided into papers. The paper is divided into **units**, each unit covering one or more interwoven learning concepts. Each unit is, thus, an individual lesson. The syllabus of PGDEMIA is given here, semester-wise, paper-wise and unit-wise.

### **First Semester**

#### **Paper I (PGDEIA101): Introduction and principles of EIA**

Objectives of Environmental Impact Assessment (EIA); Introduction and principles  
Nature and classification of environmental effects; Origins and development  
EIA as research  
EIA as decision making process

#### **Paper II (PGDEIA102): Methods and Practice of EIA**

Methods supporting EIA practice  
Predicting environmental impacts  
Determining impact significance  
Impact prediction and evaluation  
Mitigation plans and monitoring

#### **Paper III (PGDEIA103): Public participation and Management of EIA**

Managing project impacts  
Post decision monitoring  
Participation, presentation and review  
Public participation in EIA  
Cumulative environmental effects;

#### **Paper IV(PGDEIA104): Public participation and Management of EIA**

Strategic environmental assessment  
The effectiveness of EIA: Retrospect and prospect  
Comparative practice: Improving the effectiveness of project assessment  
Community participation and Role of NGOs

## Second Semester

### **Paper I (PGDEIA201): Planning and Policies in EIA**

EIA in global affairs  
Legal basis of EIA  
The land development process as it relates to EIA  
Basic principles for evaluation of the EIA process  
Cumulative and growth inducing effects

### **Paper II (PGDEIA202): Biodiversity and Applications of Computers in EIA**

Biodiversity Register  
Inventory preparation  
Biodiversity indices- Species richness; Shannon-Weiner diversity index & Simpson's diversity index  
Ecosystem (habitat) diversity  
Genetic diversity  
Applications of computer softwares in EIA

### **Paper III (PGDEIA203): Hydrology and Monitoring of Habitats**

Water quality, water supply, Monitoring of physical and chemical characteristics;  
primary and secondary treatment of water  
Flooding and erosion  
Biotics; Variety of Habitats; Wetlands and other special cases

### **Paper IV (PGDEIA204): Air & Soil Quality and Climate Change**

Soils and topography  
Monitoring of Air quality  
Monitoring of Soil quality  
Climate change

## **PRACTICALS**

Wetland biota concentration and isolation

Water sampling and preservation

Qualitative analysis of water samples and soil extracts for pollution and other parameters

Ion analysis in water samples by application of Flame Photometer (Sodium, Potassium, Calcium, Lithium)

Selection and preparation of soil samples

Practicing with air quality monitoring and background level of gamma radiation

### **6. Project report based on field visit**

#### **Supply of Self Instructional Material**

Study material in the form of one booklet per paper shall be supplied to the students as study material. However, the fast pace of innovation and development in the field of Environmental Science necessitates that students must read some other reference materials also. Studying the supplied printed material alone may not provide sufficient and complete knowledge of the subject. Therefore, it is recommended that the students should take help of other reference materials / websites for the preparation of their assignments and other examinations.