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GOVERNOR'S SECRETARIAT, BIHAR
RAJ BHAVAN, PATNA-800022

Letter No.PU-(Regulations)-36/2013-72 / GS (I),
From,

Dated 10-01-2014

U.K. Choubey
Addl. Secretary

To,

The Vice Chancellor
Patna University
Patna.

Sub:- Regarding approval of the Admission Ordinance (Semester System) and the Examination Regulations (Semester System) of **M.Sc. in Environmental Science and Management**, Under self-financing course.

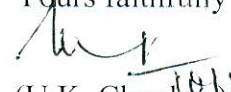
Sir,

I am directed to invite a reference to the University's letters no Acad/1359, dated 27.09.2013, Acad/1551, dated 29.10.2013, Acad/1572, dated 30.10.2013 and Acad/1596, dated 02.11.2013 on the subject noted above and to inform that the Hon'ble Chancellor, after due consideration of the proposal of the University, advice of the Advisory Committee and in exercise of powers vested in him under Section 38(4) and 39(2)(ii-proviso) of the Patna University Act, 1976, as amended up to date, has been pleased to approve the Admission Ordinance (Semester System) and Examination Regulations (Semester System) of **M.Sc. in Environmental Science and Management**, a self-financing course (**copy enclosed**) from the Session 2012-13, with the condition to seek approval of the number of seats from the State Government from the next academic Session (2014 onwards) and send compliance to this Secretariat before commencement of the next Academic Session and also communicate to this Secretariat the approval of the Ordinance and Regulations by the Senate in the very next meeting.

Further necessary action may kindly be taken accordingly.

Yours faithfully

Encl:-As above


(U.K. Choubey)
Addl. Secretary



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Further necessary action may kindly be taken accordingly.

Yours faithfully

Encl:-As above

Sd/-
(U.K. Choubey)
Addl. Secretary

Memo No. PU-(Regulations)-36/2013- GS(I) Dated

Copy alongwith copy of approved Admission Ordinance (Semester System) and Examination Regulations (Semester System) of **M.Sc. in Environmental Science and Management**, a self-financing course forwarded to Principal Secretary, Education Department, Govt. of Bihar for information and necessary action.

Encl:-As above

Sd/-
(U.K. Choubey)
Addl. Secretary

Memo No. PU-(Regulations)-36/2013- 72/ GS(I) Dated 10-01-2014

Copy alongwith copy of approved Admission Ordinance (Semester System) and Examination Regulations (Semester System) of **M.Sc. in Environmental Science and Management**, a self-financing course forwarded to Scientist-D, In-charge Computer Cell, Raj Bhavan, Patna for uploading on the website of Raj Bhavan/Guard File of Regulations and Ordinance of Patna University, Patna.

Encl:-As above

(U.K. Choubey)
Addl. Secretary

PATNA UNIVERSITY

Proposed Ordinance for Admission of Students (Semester system) to Post Graduate Degree (M.Sc.) Course in Environmental Science and Management

1. Admission to M.Sc. Environmental Science and Management course is open to candidates who have passed Graduate or an equivalent examination conducted by a University established or incorporated by law, are eligible to apply for admission.
2. Eligibility for Admission: To be eligible for admission to this course, a candidate must have:
 - a. Graduate degree in Life Sciences (Botany, Zoology, Biotechnology, Microbiology, Industrial Microbiology, Fish & Fisheries, Aquaculture, Environmental Science & Water Management and Environmental Sciences as major subject)

Or

 Graduate degree in Biochemistry, Bioinformatics as major subject

Or

 B.Sc. (Agriculture), Bachelor of Veterinary Science

Or

 Graduate degree in Geology, Geohydrology, Chemistry, Wild Life, Geography and Forestry as major subject

Or

 M.B.B.S. degree or equivalent, thereof

Every candidate must have obtained at least 55% marks (for general category) and 45% (for OBC, SC and ST) marks in Graduation.

 - b. Appeared and qualify in the Written Aptitude/Entrance Test followed by a Viva-Voce to be conducted by the Department.
3. Written aptitude/entrance test: Admission to the Post-graduate course in Environmental Science and Management shall be made on the basis of the marks obtained at the written aptitude/entrance test (100 marks) followed by viva-voce (25 marks conducted by the Department. The

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merit list for admission will be made after combining both written aptitude and viva-voce marks (altogether 125 marks).

4. Number of seats and reservation:
 - a. The total number of seats available for admission to the course is 20 (twenty) including both general and reserved categories.
 - b. The reservation of seats belonging to SC, ST, EBC(BCI) and OBC(BCII)'s categories will be provided as per the Patna University rules.
5. The fee structure for the course shall be the following:

a. Admission Fee	-	100.00
b. Tuition Fee	-	5000.00
c. Laboratory Fee	-	7500.00
d. Library Fee	-	2500.00
e. Development Fee	-	1000.00
f. Field Work	-	2000.00
g. Medical Fee	-	50.00

Total - 18150.00 Per semester

The full course fee shall be payable at the time of admission in each semester.

6. Each candidate shall have to pay Rs. 1500.00 (Rupees one thousand five hundred only) as examination each semester. It may be changed by the University time to time.
7. Each candidate shall have to pay Rs. 2000.00 (Rupees two thousand only) for the honorarium of supervisor of project work before fourth semester. It may be changed with the consent of the honorable Vice-Chancellor, P.U. in consultation with the Head and the Co-ordinator of the course.
8. The fee structure may be revised from time to time by the Vice-Chancellor, P.U. in consultation with the Head and the Co-ordinator of the course.
9. Course structure & syllabus may be changed by the consent of the honorable Vice-Chancellor, Patna University.
10. The Post Graduate Degree in Environmental Science & Management course shall be placed in the Faculty of Science, P.U.

Bharmbir Pr.

06.12.2013

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PATNA UNIVERSITY, PATNA

REGULATIONS FOR POST GRADUATE (M.Sc.) COURSE IN
ENVIRONMENTAL SCIENCE AND MANAGEMENT

1. Student shall undergo a certified study extending to four semesters. Each semester will consist of at least 90 teaching days of six hours each.
2. **Eligibility for Admission:** To be eligible for admission to this course, a candidate must have:

2.1. Graduate degree in Life Sciences (Botany, Zoology, Biotechnology, Microbiology, Industrial Microbiology, Fish & Fisheries, Aquaculture, Environmental Science & Water Management and Environmental Sciences as major subject)

Or

Graduate degree in Biochemistry, Bioinformatics as major subject.

Or

B.Sc. (Agriculture); Bachelor of Veterinary Science

Or

Graduate degree in Geology, Geohydrology, Chemistry, Wild Life, Geography and Forestry as major subject

or

M.B.B.S. degree or equivalent, there of

Every candidate must have obtained at least 55% (for general category) and 45% (for OBC, SC and ST) marks in Graduation.

- 2.2. Appeared and qualify in the Written Aptitude/Entrance Test followed by a viva-voce to be conducted by the Department.

3. **Written aptitude/entrance test and Viva-voce:**

- 3.1. Admission to M.Sc. Environmental Science and Management course shall be made on the basis of a written aptitude/entrance test (100 marks) followed by viva-voce (25 marks), both to be conducted by the Department. The merit list for admission will be made after combining both written aptitude and viva-voce marks (altogether 125 marks).
- 3.2. The questions of written aptitude/entrance test will cover the disciplines such as botany, zoology, chemistry, environmental science, cell biology, molecular biology, genetics, microbiology, biochemistry, physiology, geology, statistics and computer science. The details of the written test will be available along with the application form.
4. Reservation seat to SC, ST, EBC (BCI) and OBC (BC II) category students unless specified otherwise, will be as per the rules of Patna University applicable at the time of admission.
5. Didactic lectures shall not exceed two third of the time schedule. Regular seminar, group discussions and problem- oriented discussion shall be held regularly.

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Department of Zoology
Patna University

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Semester - IV					
Code	Subject	Credit	End Semester Exam (ESE)	Continuous Internal Assessment (CIA)	Total
ESM-M-401	Elective Paper- I A ₁ /B ₁	5	70	30	100
ESM-M-402	Elective paper-II A ₂ /B ₂	5	70	30	100
ESM-M-403	Practical -IV (Based on ESM-M-401 & 402)	4	70	30	100
ESM-M-404	Project/Dissertation & Viva	6	70	30	100

Major Elective Papers: Two to be selected

1. ESM-M-401 A₁- Natural Resources, Wildlife and Biodiversity
2. ESM-M-401 A₂- Environmental Pollution
3. ESM-M-401 B₁- Disaster Management
4. ESM-M-401 B₂- Environmental Health

- Additional elective papers will be included in the syllabus in due course by the consent of Honorable Vice-Chancellor, Patna University.
- Some more practical works may be incorporated depending upon the infrastructures of the department.
- Course structure & syllabus may be changed by the consent of Vice-Chancellor, Patna University.

7. Examination :

- 7.1. Only a student registered with the Patna University after admission in this course will be eligible for appearing in the examinations.
- 7.2. There shall be one end semester examination (ESE) in each semester.
- 7.3. Theory paper will be set as prescribed in the syllabus by the examiners out of panel as approved by the moderation board and assented by the Vice-chancellor, Patna University. The each theory paper will be distributed in 5 Units. The duration of the theory examination will be of 3 (three) hours and students are required to answer total of 5 (Five) questions out of which question number one and two will be compulsory which will be of objective type and short answer type, respectively.

The details of questions break-up for each theory paper (Total Marks-70) will be:

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Department of Zoology
Patna University

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Section 1

Questions 1: **Objective type** carrying 20 marks: 10 multiple choice questions (2 from each unit).
Examinee will answer all questions (10x2=20 marks)

Section 2

Question 2: **Short answer type**: Five questions to be set (one from each Unit).
Examinee will answer any four questions (5 marks x 4 question = 20 marks)

Section 3

Five questions to be set (One from each Unit), out of which examinee will answer any three questions (10 marks x 3 question = 30 marks)

7.4. Candidate's skill in interpretation of common investigated data, identification of specimens etc. will be evaluated.

7.5. The examination is to be designed with a view to ascertain whether the candidate has developed necessary knowledge and skills along with clear concepts of fundamentals which are necessary for him/her day to day work competently.

7.6. There shall be two external examiners preferably from outside the university or state in each practical paper (of six hours duration).

8. Distribution marks in each semester:

Evaluation of each semester shall be done by a Continuous Internal Assessment (CIA) by the concerned course teacher not below than the rank of an assistant professor or equivalent there of as well by an End Semester Examination (ESE) and will be consolidated at the end of the course.

(i) Distribution of marks in End Semester Examination (ESE):

- a) **First semester**: There shall be three theory papers and one practical paper of 70 marks each carrying a total of 280 marks.
- b) **Second semester**: There shall be three theory papers and one practical paper of 70 marks each carrying a total of 280 marks.
- c) **Third semester**: There shall be three theory papers and one practical paper of 70 marks each carrying a total of 280 marks.
- d) **Fourth semester**: There shall be two theory papers (Elective papers) and one practical paper based on elective papers of 70 marks each and a Project/dissertation of 70 marks carrying a total of 280 marks. In the project/dissertation work each student shall have to undertake a mini research project on the topic related as mentioned in the paper ESM-M-404 and submit his or her results in scientific manuscript form for evaluation on the dissertation and viva-voce. For research project/ dissertation, students may go outside for about one month. During dissertation work, regular classes will not be held in the department.

Head
Department of Zoology
Patna University

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After appearing at the Semester Examination, the candidates can be placed in the following categories in the context of declaration of the results of the Semester Examination:

1. A candidate shall be declared to have **passed** in a Semester Examination provided
 - (a) He / She has secured at least 40 % marks in each paper with the ESE (End Semester Examination) and CIA (Continuous Internal Assessment) marks taken together and ;
 - (b) He /She has secured at least 45 % marks in the aggregate of all the papers of the Semester Examination.
 2. Those who **have not passed** in examination of all the papers of the First Semester shall be treated as **promoted** to the Second Semester;
 3. Such candidates who have failed in examination of First Semester are allowed **promotion to Second Semester** on the condition that they have to clear their First Semester Examination, together with the Third Semester Examination;
 4. Candidates who have **not passed** in Second Semester Examination shall be **promoted to Third Semester but have to clear the** Second Semester Examination together with the Fourth Semester Examination;
 5. All the candidates who have appeared at the CIA and have the minimum required percentage of attendance in the IIIrd Semester and filled up the examination form in time shall be promoted to the IVth Semester;
 6. Before appearing at the Semester IV examination, such candidates who are promoted shall have to pass with at least 40% marks in individual paper and 45% marks in the aggregate in at least 8 papers i.e. 50 % papers which they have offered.
 7. Such **promoted** candidates, however, will carry on the CIA marks obtained earlier;
 8. The candidates who have failed in any semester examination will appear in the ensuing corresponding Semester Examination and such candidates are also allowed to appear in those papers (in addition to the papers they have failed) in which they have secured less than 45% marks. It shall be applicable only in the End Semester Examination.
 9. Candidates may clear their **failed papers** in subsequent examinations as **ex-students**.
 10. Candidates shall have to clear all the papers of his /her course within the maximum period of four academic sessions from the date of his /her first admission to the semester programme.
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10. **Attendance:** 75% of the attendance in a subject for appearing in the examination shall be compulsory.
 11. Regular periodical exams will be conducted throughout the course.
 12. The Vice-chancellor will appoint a board of moderator and all the examinations conducted and results published under the examination Board, Patna University.
 13. Wherever this regulation is silent, such matter will be governed by the regulation already existing for the postgraduate science course of the Patna University.

Head
Department of Zoology
Patna University

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