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**PATNA UNIVERSITY, PATNA**  
**ORDINANCE**  
**&**  
**REGULATION**

For

Two Years (Four Semesters)  
Post Graduate Degree Program

**M.Sc. in Biotechnology**

(Faculty of Science)

A self financing program

under

**Choice Based Credit System (CBCS)**

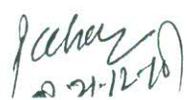
(To be effective from the academic session commencing from 2018)



**Co-ordinator**  
**M. Sc. Degree Course in Biotechnology**  
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**PATNA UNIVERSITY, PATNA**  
**ORDINANCE AND REGULATION**  
**Two Years (Four Semesters) Post Graduate Degree Program**

**M.Sc. Biotechnology (a self financing program)**  
**in the Faculty of Science**  
**Under**  
**CHOICE BASED CREDIT SYSTEM (CBCS)**

**PREAMBLE:**

The CBCS provides an opportunity for the students to choose program comprising core, elective and ability enhancement course. The programs can be evaluated following the grading system, which is considered to be better than the conventional marks system. Therefore, it is necessary to introduce uniform grading system in the entire higher education in India. This will benefit the students to move across institutions within India to begin with and across countries. The uniform grading system will enable potential employers in assessing the performance of the candidates; the program shall follow the guidelines formulated by the UGC in order to bring uniformity in evaluation system and computation of the Cumulative Grade Point Average (CGPA) based on student's performance in examinations.

The Post Graduate degree program for Biotechnology (a self financing program) under Faculty of Science shall be four semesters spread over two years duration. The program shall be named as the 'Master of Science' program and shall be abbreviated as M.Sc.

**1. General**

1.1 The ORDINANCE and the REGULATIONS shall be called the 'Admission Ordinance' and 'Regulations of Examinations' for M.Sc. Biotechnology, Post Graduate Degree Program to be applicable in the Patna University.

1.2 The ordinance and regulation shall be effective from the academic session 2018-19.

1.3 The M.Sc. Program of Biotechnology shall consist of 20 papers spread over four semesters consisting of **Core Courses (CC)**, **Elective Courses (EC)**, **Discipline Specific Elective Courses (DSE)**, **Ability/Skill Enhancement Courses (AEC/SEC)** and **Ability Enhancement Compulsory Courses (AECC)** as described in **Table 1**. There shall be five courses/ papers in first semester, six courses/ papers in second semester, six courses/ papers in third semester and three courses/ papers in fourth semester, each course carrying 100 marks. The entire curriculum shall be of 2000 marks taken together. However, the CGPA / class shall be awarded on the performance of the candidate on 16 courses/papers which include the 14 CC courses/papers and two EC courses/papers having an aggregate of 1600 marks. The various types of courses under CBCS are defined in **section 3**.

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### 3.1.7. Dissertation/ Project/ Internship/ Industrial Training:

An elective course designed to acquire special/advanced knowledge, such as supplement study/support study to a project work and a candidate studies such a course on his own with an advisory support by a teacher/ faculty member/scientist of own university/other university or any institution/statutory body is called dissertation/ project.

### 3.2. CREDIT

3.2.1 The total minimum credits, required for completing the PG program is 100.

The details of credits for individual components and individual courses are given in Table 1 .

**Table-1: Structure of the 2 Yrs (Four Semesters) Post Graduate Degree Program under CBCS.**

Semester	No. of Course/ Paper	Credit per Course/ Paper	Total Credit	Minimum No. of Learning Hours	No. of Core Course/ Paper	No. of Elective Course/ Paper	Code & Nature of Elective Courses/ Paper
I	05	05	25	250	4	1	AECC-1
SEMESTER BREAK							
II	06	05	30	300	5	1	AEC/SEC-1
SEMESTER BREAK							
III	06	05	30	300	5	1	AECC-2
SEMESTER BREAK							
IV	03	05	15	150	0	3	EC-1* EC-2* DSE-1 or GE-1
Total	20		100	1000	14	6	

For Tutorial (T)/ Practical (P)/ Project Work (PW)/ Field Work (FW)/ Internship etc., extra working hours may be added as per requirement and will be decided by the BOCS of the respective subject.

\* The two **Elective Courses (EC)** to be studied in semester IV may be

- One Theory paper and One Practical paper
- / One Theory paper and One Project work
- / One Theory paper and One Field work
- / Both Project work/ Internship

**IMP: It is desirable that all students of all courses be given adequate exposure over and above the class room teaching to enhance the scope of employability.**

3.2.2 The distribution of the six elective courses/papers shall be two EC, one DSE or one GE, two AECC; one AEC/SEC. Students may opt for any elective course out of a list of elective papers (**Basket**) offered by the parent department or any other departments as per his/her choice with the prior permission of the parent department. The list of elective papers, syllabus and prerequisite of the elective course will be decided by the Board of Courses of Studies (BOCS) of the concerned subject/department.

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3.2.3 The final CGPA/ class will be decided on the performance of the student in the courses/ papers including the 14 core courses (CC)/ papers and two elective courses (EC)/ papers.

3.2.4 The one DSE or one GE, two AECC, one AEC/SEC course /paper will be qualifying in nature and a student has to score at least 45% marks in these courses/papers. Grade will be awarded separately for these courses, however, performances in these elective courses/ papers will not be considered for awarding the final CGPA / class.

### 3. 2. 5 Ability Enhancement Compulsory Courses (AECC):

University will run two **Ability Enhancement Compulsory Courses (AECCs)** which are qualifying in nature and a student has to qualify in both these courses. The courses are:

#### AECC-1

Environmental Sustainability (3 Credit) & Swachcha Bharat Abhiyan Activities (2 Credit)

#### AECC-2

Human Values & Professional Ethics (3 credits) and Gender sensitization (2 credits)

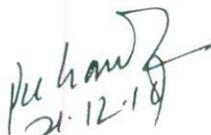
Students will do assignments/project work related to institutional social responsibilities including Swachcha Bharat Abhiyan Activities during SEMESTER BREAK.

3.2.6 University will run a number of **Ability Enhancement Courses (AEC)/ Skill Enhancement Courses (SEC)**; a student can choose one from these. For example:

#### Basket of Ability/Skill Enhancement Courses (AEC/SEC)

- Computers and ICT
- Web Designing
- Derivatives and Risk Management
- Solid Waste Management
- Mushroom Technology
- Biofertilizer Technology
- Environmental Law and Policy
- Tourism and Hospitality Management
- Life and Communication Skill Development
- Yogic Sciences
- Any other course decided by the University / Department



  
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