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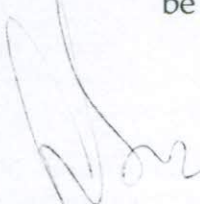
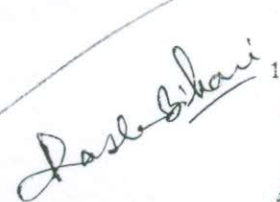
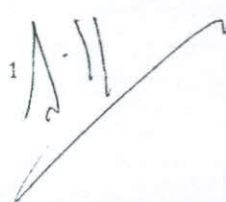
**Ordinance for Admission to M.Sc. (Semester System)
in the Faculty of Science including M.A. in Mathematics and
Statistics in the Universities of Bihar**

1.0 Preamble

The Post Graduate Degree, called 'Master of Science' in the Faculty of Science, shall be offered in the following Subjects: Botany, Chemistry, Geology, Mathematics, Physics, Statistics, Herbal Chemistry, Zoology, Environmental Science, Geography, Anthropology and Home Science, Biochemistry and Biotechnology & Bioinformatics. The 'Master of Science' course shall be abbreviated as M.Sc. Course. The courses will spread over a period of two years (Four Semesters) duration. Each academic session shall have First and Third semesters from July to December and Second and Fourth from January to June every year.

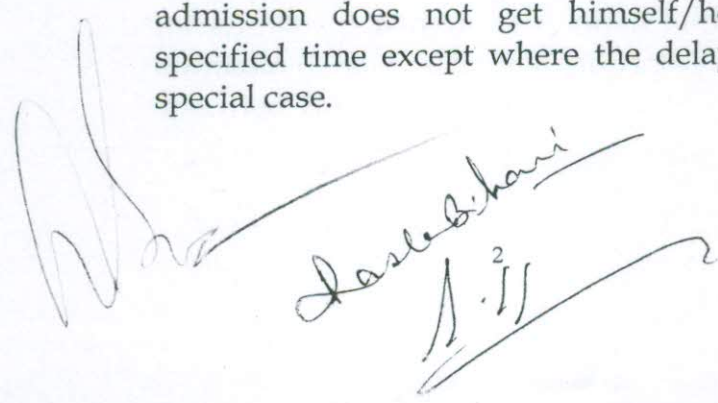
2.0 Admission

- 2.1 A candidate seeking admission to M.Sc. (Semester System) must be a graduate with Bachelor Honours Degree in the subject concerned.
- 2.2 In case of students do not having Honours Bachelor Degree, their relative merit vis-a-vis Honours candidate will be judged as having 10% less than the Honours candidate.
- 2.3 In such subjects where candidate with Honours/Pass are not available, students with allied subjects may be treated at par as having Honours Degree in the subjects. The academic council of the University will decide the allied subjects on the recommendation of equivalence committee of the University.
- 2.4 In case the sanctioned seats remain vacant in any category, they shall be filled by candidates next in the merit list.
- 2.5 (a) The reservation of seats for the courses shall be as per reservation rules of the Government of Bihar.
(b) A maximum of two seats each over and above the sanctioned seats shall be filled by applicants who have distinguished themselves in Sports & Fine Arts. Under this category only those applicants will be considered who have represented their University/State at the State/National Level events.
(c) A maximum of two seats in each subject shall be reserved for physically handicapped and sons/daughters of unmilitary personals. This reservation shall be over and above the sanctioned seats.
(d) Maximum of Two seats over and above the normal strength shall be reserved for applicants having NCC-C Certificate or NSS

Volunteers with national event participation certificate representing the University or State.

- (e) No candidate shall be entitled to two weightages.
- 2.6 The total number of seats for the M.Sc. (Semester System) in each subject shall be decided by the concerned University in accordance with the guideline received from the State Government from time to time.
- 2.7 No applicant shall be admitted to the course who has not applied for admission within the notified time.
- 2.8 (a) The admitted students can appear in the University examination only when they are registered with their respective Universities.
- (b) No such applicant shall be admitted who, in the opinion of the Head of the Department and endorsed by the Vice-Chancellor, should not be admitted in the best interest of the respective University.
- (c) Any student admitted to M.Sc. (Semester System), if it is found at any letter point of time that any document/documents or submission made by him in support of his/her admission is/are forced are false, his admissions shall stand cancelled. The concerned students shall be solely responsible for the cancellation of the admission or other punitive action.
- 2.9 No candidate shall be allowed to register as a student in any other course during the same academic sessions of his/her study of M.S. in the faculty of Science.
- 2.10 2% seats of the sanctioned stands in any subjects may be filled with NRI/Foreign students. These seats will be treated as over and above the normal sanctioned strength. Applications of NRI under this category students recommended by M.E.A. (Ministry of External Affairs) and such students with a bonafide proof of NRI status may apply for admission. The fee and another charges shall be deposited in appropriate foreign currency.
- 2.11 Admission of students to the Post-graduate Courses in Statistics and Mathematics in the Faculty of Social Sciences shall be made in order of merit on the basis of marks obtained by applicants in Statistics and Mathematics at the Bachelor examinations subject to the condition and restrictions prescribed hereunder:-
 - (a) Applicants securing Honours in Statistic/Mathematics.
 - (b) Applicants who have studied Statistics/Mathematics for three consecutive years at the Undergraduate level.
- 2.12 (a) No applicant shall be admitted to the course who has not applied for admission within the notified time or who being selected for admission does not get himself/herself admitted with the specified time except where the delay has been condoned in a special case.



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- (d) Maximum of Two seats over and above the normal strength shall be reserved for applicants having NCC-C Certificate or NSS Volunteers with national event participation certificate, *representing the university or state*
- (e) No candidate shall be entitled to two weightages.
- 2.6 The total number of seats for the M.Sc. (Semester System) in each subject shall be decided by the concerned University in accordance with the guideline received from the State Government from time to time.
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- (b) The admission of any student admitted to M.Sc. may be cancelled, if it is found at any subsequent stage that the document submitted or statement made by him or her in support of his or her claim for admission is false or deceptive.
- (c) No candidate shall be allowed to register as a student in any additional course leading to a diploma or a degree during the academic years of his/her study for M.Sc.

3.0 The fee structure for the M.Sc. shall be as follows :

A. Fee Structure academic session for Indian Students (RI) is as follows :

1. Admission Fee (For 2 Semester)	₹ 300.00
2. Registration Fee (One Time) if applicable	₹ 200.00
3. Caution Money (One Time)	₹ 500.00
4. Tuition Fee (One Time in each Academic Session)	₹ 240.00
5. Eklavya & Tarang (One Time in each Academic Session)	₹ 10.00
Total	₹ 1250.00
6. Miscellaneous Fee :	
Central Library Fee	₹ 200.00
Electricity Fee	₹ 150.00
Identity Card Fee	₹ 50.00
NSS Fee	₹ 50.00
Parking	₹ 50.00
Internal Exam Fee	₹ 500.00
Library Maintenances Fund	₹ 150.00
Building Maintenances Fund	₹ 200.00
Medical Fee	₹ 50.00
Athletic Fund (for College)	₹ 50.00
Athletic Fund (for University)	₹ 50.00
Common Room Fund	₹ 50.00
Extra Curricular Fee (Cultural)	₹ 50.00
Environmental Protection Fee	₹ 20.00
Student Welfare Fee	₹ 10.00
Poor Boys Fund	₹ 10.00
Students Union Fund	₹ 10.00
Society Subscription	₹ 50.00
Magazine Fund	₹ 50.00
Hand Book/Directory	₹ 50.00
Total	₹ 1800.00
Grand Total	₹ 3050.00

Notes :

- (a) That ₹1000/- will be charged as an additional fee in case of subjects with practical for each Academic Year.

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- (b) That `1000/- will be additionally collected from every student in subjects having field study as a compulsory component of the syllabus.
- (c) That M.Sc. general students, except for Mathematics, have to pay `3050 + `1000 = `4050 and SC/ST students to pay `3810/- only in the 1st academic year and in the 2nd academic year M.Sc. fee shall be `3350/- for general students and `3110 for SC/ST students only. SC/ST students shall remain exempted from tuition fee in each year.

B. Fee for Non-Resident Indian (NRI) and Foreign Students

1. Admission Fee (One Time in an Academic Session)	\$ 180
2. Registration Fee (One Time)	\$ 20
3. Caution Money (Refundable), one time subject to completion of the course	\$ 200
4. Tuition Fee (Annual)	\$ 500
5. Miscellaneous Fee (Annual Charges)	\$ 220
6. Eklavya & Tarang	\$ 50
7. Internal Examination Fee (for one academic session)	\$ 50
8. Practical Examination Fee (for one academic session)	\$ 100
Total Fees at the time of admission in the 1st Academic Session	\$ 1320

Note : M.Sc. (2nd Academic Session) fee shall be \$ 1100

- 3.1 The fee structure may be revised from time to time by the Vice-Chancellor in consultation with the State Government.
- 3.2 The proposed fee structure shall be applicable only after the approval of statutory bodies of the respective Universities followed by the approval of the State Government.

Ref. : General Ordinance :

If there is any need, University with the approval of relevant statutory bodies and Chancellor Secretariat, can modify, add or delete any provision of this ordinance.

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Regulations for M.Sc. (Semester System) including M.A. in Mathematics and Statistics from the Academic Session, 2014-2015 Faculty of Science

1. General

- 1.1 These Regulations shall be called the regulations for M.Sc (Semester system of the Universities of Bihar including M.A. in Mathematics and Statistics.
- 1.2 These Regulations shall come into force from the academic session 2014-2015.

2. Programme of Study

- 2.1 The University shall offer M.Sc. degrees in the following subjects in the Faculty of Sciences :

Botany, Chemistry, Geology, Mathematics, Physics, Statistics, Herbal Chemistry, Zoology, Environmental Science, Geography, Anthropology and Home Science. Biochemistry and Bio-technology, Bio informatics.

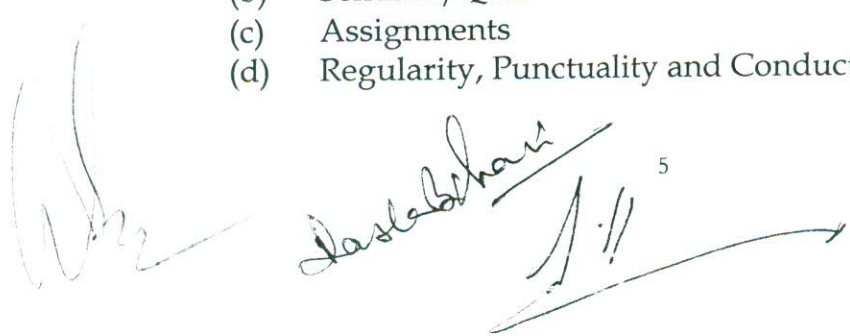
- 2.2 The durations of M.Sc. (Semester System) course shall be of two academic sessions/four semesters. Each semester shall be of 16 to 18 weeks of actual study.
- 2.3 The Examination for Master's Degree in Science subjects shall consist of four semesters of six months each.
- 2.4 Each academic session shall consist of two semesters – I & III : from July to December and II & IV : from January to June.
- 2.5 The M.Sc. Course shall consist of 16 papers spread over four semesters with four papers each semester, carrying 100 marks each paper. The entire curriculum shall be of 1600 marks taken together.
- 2.6 The distribution of papers like theory, practical, field work, project, internship, dissertation etc. with number of credits is specified in each subject in the course structure of the subject concerned of the department.
- 2.7 The term 'credit' means weightage given to a course in relation with the instructional hours assigned to it. One credit will consist of ten hours of instruction. Each paper of the Master's degree programme carried number of credits specified in the course structure of the subject concerned.

3. Evaluation of Performance Under Semester System

- 3.1 The performance of a student in each paper will be assessed on the basis of a Continuous Internal Assessment (CIA) of 30 marks and the End of Semester Examination (ESE) consisting of 70 marks.

- 3.2 The components of CIA shall be :

- | | |
|--|------------|
| (a) Two Mid-Semester Written Tests of one-hour duration each | - 15 Marks |
| (b) Seminar/Quiz | - 5 marks |
| (c) Assignments | - 5 marks |
| (d) Regularity, Punctuality and Conduct | - 5 marks |

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Total

- 30 marks

- 3.3 The concerned teacher of the course/paper shall be responsible for conducting the mid-semester tests and other components of the CIA. In addition to CIA, the ESE, which will be written examination of 3-hours duration, would also form an integral component evaluation.
- 3.4 The evaluation of laboratory paper and field work, wherever applicable will also be based on CIA and an end-semester practical examination.
- 3.5 All such examination shall be as per the provisions of examination board and moderation board of the University.

4. Examinations :

4.1 The End-Semester-Examination will be conducted by the University. The two Mid-Semester Tests and practical examinations will be conducted by the concerned departments, which will appoint external examiner(s) for practical ESE examination. The two mid-semester tests will be conducted and marked by the teacher concerned. The teacher shall show the answer scripts of the first mid-semester tests to the students of the class.

4.2 The End of Semester Examination (ESE) shall be named as follows :

- (a) M.Sc. Part (I) - I Semester Examination and II Semester Examination respectively.
- (b) M.Sc. Part (II) - III Semester Examination and IV Semester Examination respectively.
- (c) Syllabus for each paper shall be divided into 5 units. Bases on this, the question paper pattern shall be as follows :

Part - A

Ten objective type Questions 10 × 2 = 20 marks
(Two Questions from each Unit)

Part - B

Five Short Answer Questions (Four to be answered) 4 × 5 = 20 marks
(One Questions from each Unit)

Part - C

Three long answer Questions out of Five 3 × 10 = 30 marks
to be answered (One question from each Unit)

4.3 The examination of I and III Semesters, shall be generally held in the month of November-December and that of II and IV Semester, shall be held in the month of May-June.

4.4 In formulating the entire programme of studies, each Department shall be guided by the consideration that at the Postgraduate level, students should be familiar with all the sub-disciplines, trends and paradigms of the subject. Keeping this in view the Department will decided 12 core papers in Semester I, II and III and electives (optional) papers in Semester IV.

4.5 Paper Setting : For ESE, external examiners of relevant subject shall be appointed by the University as per the provisions of the examination board :

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- 4.6 In Subjects, where there is Practical/Project/Field Study/ Internship/Dissertation etc. not more than 4-5 credits should be allowed for such papers in each semester, for which 50 marks will be for CIA and 50 marks for ESE.
- 4.7 All practical papers shall be evaluated by two external examiners. The distribution of CIA marks in practical papers shall be as per the course structure.

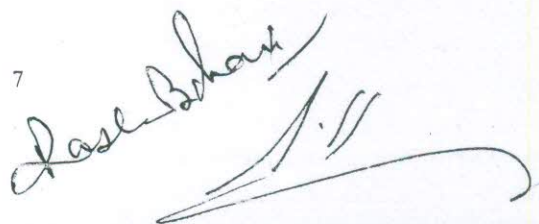
5. Passing of Examinations and Promotions Rules
Promotion Rules

- 5.1 There shall be no supplementary examination in any of the semester courses. (I, II, III and IV).
- 5.2 The candidates who have been admitted to the First Semester of a 2-year Post-Graduate Programme in a session can be placed in the following categories on the basis of their attendance in the Semester.
 - (i) Those who have appeared at the CIA and attended the required minimum percentage (75%) of attendance of lectures/practical classes separately as per the provisions content under the section 4 and 5 of chapter III of the old Regulation of Bihar University Act 1976 as amendment up-to-date shall be permitted to appear in the ends semester examination.
 - (ii) Those who have not attended the required minimum percentage of attendance (75%) both in Theory and Practical shall no case be permitted to appear in the First End Semester Examination. However, Head of the Department/Principal may condone 5% and the Vice-Chancellor 10 percent attendance on the basis of medical certificate after having satisfaction on the medical report, submitted by the student.

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:

- 5.3 To be declared passed in End Semester Examination in any subject, a candidate must secured at-least 40% marks in each paper separately both in theory and a minimum of 45% in total.
 - (i) However if a candidate passes in at-least two papers in his/her First, Second and Third End Semester Examination, he shall be promoted to next higher semester.
 - (ii) Candidates shall have to clear their backlog paper in the next end semester examination of that semester whenever it is available.
 - (iii) Even if a student is promoted to Fourth Semester, his Final result will only be declared when he/she has cleared all their backlog papers.
 - (iv) Final result of M.Sc. Course shall be published on the basis of candidate performance in all the 16 papers speared over Fourth Semesters.



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- (v) The Final result will be published only after he has cleared all the 16 papers securing minimum qualifying marks.
- (vi) Since it is a continuous evaluation programme, student shall be awarded Great Point (GP) at the End of each Semester Examination and cumulative Great Point (CGP) at the End of Final End Semester Examinations in 10 point scoring system.
- (vii) There shall be no supplementary examination. A student has to score minimum 50% marks in his CIA. Failing to secure minimum marks he will have to repeat the CIA along with the students of the same semester of the next academic session.
- (viii) If students fail to secure minimum 50% marks in CIA of any paper his result will be declared as fail in that paper. Students shall have to reappear in that paper in the same semester of next academic session. The name of the promoted candidate/candidates will not be included in the merit list of that subject.
- (ix) A promoted candidate, if he has passed in CIA but fails in theory paper/papers, he/she shall retain his/her CIA award and will reappear in the theory paper only of the semester whenever available. However, if a candidate is declared fail in any End Semester Examination, shall retain nothing and will have to redo the course work of failed semester again and he has to appear again in CIA as-well-as theory paper.

6. **Improvement of Result :**

If candidate passes in End Semester Examination, he/she may apply for the improvement of his/her result in maximum of two papers of the semester. He/She can avail this facility only twice during the duration of whole course. Better of the two results will be treated as final result of candidates in those papers.

Forever the name of such candidates with improved result will not be included in the merit list.

7. **Declaration of Result :**

The following grading system shall be used by Teacher/Examination department :

<i>Letter Grade</i>	<i>Percentage Range</i>	<i>Numerical of Letter Grade</i>	<i>Description of Grade</i>
A	100 - 90	10	Outstanding
B	80 - 89	9	Excellent
C	70 79	8	Very Good
D	60 - 69	7	Good
E	50- 59	6	Average
P	45 - 49	5	Pass
F	Less than 45	Less than 5	Fail

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8. **Examinations :**

8.1 The End Semester Examinations shall be conducted by the University. The continuous Internal Examinations shall be conducted by the concerned department.

9. **Passing of Examination :**

9.1 A student shall be declared to have 'passed' and promoted to the next semester when he/she earns F or above grade in the semester examination covering continuous evaluation, mid-term and end-term examinations in all the courses for which he/she was registered in the said semester.

(i) In order to be promoted from Semester I to Semester II, a candidate has to pass in at least two out of four papers in Semester I Examination.

(ii) In the Second Semester Examination a student has to pass in at least two out of four papers.

(iii) In order to be promoted to the 3rd Semester, a candidate needs to pass in at least two papers of Semester I and two papers of Semester II.

(iv) A candidate must clear all the four papers of Semester I, at least two papers of Semester II and two papers of Semester III in order to be promoted to the 4th Semester.

(v) In the 4th Semester a candidate needs to have cleared all the Sixteen papers for the award of the Degree.

(vi) The students passed or promoted to the next Semester shall be entitled to get admitted in the Semester to which he/she has been declared passed/promoted.

9.2 A student will be deemed as 'failed' in a semester when he/she gets F grade in more than 50% of the courses offered in the examinations to meet the requirements. Such students will be advised by the University to repeat the semester on payment of semester fee or the half of the academic year fee.

9.3 A student who has secured less than F in one or more course may also be promoted to the next semester may also be promoted to the next semester if he/she has not otherwise failed as per section 9.2 above. However, he/she will have to re-appear a the examination of such courses one time only as and when it is held or at the time of regular end-semester examination in which he/she has been promoted.

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- 9.4 A student shall be declared to have failed in the programme when he/she fails to qualify for promotion to the next semester after two successive attempts.
- 9.5 Grades that may be shown in the award sheet of a student without any numerical value are N.A. (Not Appeared) and S.P. (Satisfactory Performance) for course/s extending beyond a semester such as project work.
- 9.6 There shall be a Grade Point Average (GPA) calculated for each semester on the basis of grades obtained in that semester. The GPA for the Jth Semester is calculated as :

$$GPA_J = \frac{\sum_{i=1}^n m_i o_i}{\sum_{i=1}^n o_i}$$

Where n is the number of course in the Jth semester, m_i denotes the numerical value of the grade obtained in the Jth course of the semester o_i denotes the number of credits for the Jth course of the semester. For example, consider the numerical grade and credit of a student given in the table below GPA for Jth semester can be calculated.

Course	Course I	Course II	Course III	Course IV	Course V	Course VI	Course VII
Credit	2	2	4	2	2	2	2
Numerical Grade	7	8	5	7	6	8	8

The GPA for the Jth semester is calculated as :

$$GPA_J = \frac{7 \times 2 + 8 \times 2 + 5 \times 4 + 7 \times 2 + 6 \times 2 + 8 \times 2 + 8 \times 2}{2 + 2 + 4 + 2 + 2 + 2 + 2} = \frac{108}{16} = 8.75$$

The Cumulative Grade Point Average (CGPA) for k semester is given as:

$$CGPA = \frac{\sum_{j=1}^k (GPA_j \times C_j)}{\sum_{j=1}^k C_j}$$

Where C_j is the total number of credits in the jth Semester. For example, consider the GPA's obtain by a student in four semester along with total credit in each semester is given as follows.

Semester	First	Second	Third	Fourth
GPA	6.75	6.00	8.12	7.62
Total Credit	16	20	18	16

$$CGPA = \frac{(6.75 \times 16) + (6.00 \times 20) + (8.12 \times 18) + (7.62 \times 16)}{16 + 20 + 18 + 16}$$

$$= \frac{108 + 120 + 146 + 16 + 121.92}{70}$$

$$CGPA = \frac{496.06}{70} = 7.08$$

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- 9.7 The award sheet of the students will show the grades obtained in all the courses offered in each semester, grades/categories without numerical value (if applicable), the GPA and the promotion status.
- 9.8 To be eligible for the award of Master Degree, students must obtain a minimum final cumulative Grade Point Average (CGPA) of 4.0.
- 9.9 To find percent equivalent to CGPA the following formula may be used: $\text{percent} = \text{CGPA} \times 10$
- 9.10 Answer books or sheets will be coded before being passed on the examiner and decoded before tabulation work.

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