

**Academic Rules and Regulations for
M.Sc. in Mathematics (Professional) Program**



**Department of Mathematics
Jagannath University
Dhaka-1100**

M.Sc. in Mathematics (Professional) program
Department of Mathematics
Faculty of Science
Jagannath University

**Academic Rules and Regulations for M.Sc. in
Mathematics (Professional) Program**

(Effective from Fall-2022 and onward)

Duration: 1 year (2 Semesters)

1. Preamble:

Department of Mathematics, Jagannath University is going to offer M.Sc. in Mathematics (Professional) program to prepare skilled and qualified professionals especially for recent job markets. The curricula will be formulated by teaching methodologies based on credible thinking to help students in maximizing their performance.

We have a good number of outstanding faculty members here in the department and we are confident enough in accomplishing our mission and looking forward to an ever-bright professional future of our beloved country.

In order to fulfill the M.Sc. degree requirements, a student must achieve a total of 38 credit hours with a minimum CGPA 2.50, Students should take 27 credit hours theory course work (09 Courses), 06 credit hours Lab work, 03 credit project work and 02 credit viva-voce. The length of study is divided into 2 (two) semesters (6 months per semester). The maximum length of study is 3 (three) years. All courses are to be taught in the weekend and elected from the course offered in the M.Sc. in Mathematics (Professional) Program.

Credit Distribution

Category	1st Semester	2nd Semester
Theory	15 credits (05 courses, 3 credit each)	12 credits (04 courses, 3 credit each)
Lab	03 credits (01 course)	03 credits (01 course)
Project	-	03 credits (01 course)
Viva-Voce	-	02 credits (01 course)
Total	18 Credits (06 Courses)	20 Credits (07 Courses)

2. Title of the Program and Name of the Degree

This program is known as M.Sc. in Mathematics (Professional) Program and students after completing all the requirements of program will get degree of Master of Science in Mathematics (Professional) from the University.

3. Objectives of the M.Sc. in Mathematics (Professional) Program

The Specific objectives of the program are:

- (a) To prepare the students regarding different Mathematics related background with the necessary skills and techniques for developing career in the field of physical sciences.
- (b) To promote the students' perceptions on various functional areas of Mathematics and developing their understanding of interrelationships among them.
- (c) To prepare the skilled and qualified Mathematics professionals not only for local market but also for the global market.
- (d) To develop the critical thinking, interpersonal communication skills and leadership qualities of the students to enable them to work efficiently and effectively.

4. Admission Requirements and Procedures

Eligibility for submission of application for the Admission Test is as follows:

- (a) S.S.C./equivalent and H.S.C./equivalent in science group with minimum GPA 2.50 out of 5.0 for each category or second division approved as per government rule or by the Academic Committee of the Department of Mathematics.
- (b) Having a B.Sc. (Hons.) degree in Mathematics/ Physics/ Statistics/ Computer Science/Any Engineering Equivalent degree or B.Sc. (Pass) degree including Mathematics courses with at least GPA 2.25 out of 4.0 or 2nd class approved by the equivalence Committee of the Department of Mathematics.

Graduates in the above mentioned discipline can apply for the Admission Test, which will be considered by the Department of Mathematics, Jagannath University twice a year. Candidates seeking admission have to apply in prescribed form within the deadline to be announced by the Department of Mathematics. The M.Sc. in Mathematics (Professional) Program Admission Committee will decide the admission test schedule and admission criteria. The M.Sc. in Mathematics (Professional) Program Admission Committee will be headed by the Program Director of the Program Coordination Committee.

All Bangladeshi applicants must take the Admission Test. Foreign applicants with a minimum percentile of 50 in GRE may be exempted from the written test. However, they will be required to appear for an interview. To qualify in written rest, an applicant must obtain a minimum qualifying score in the admission test.

5. Course Identification

Each course is designed by four letter words identifying the subject followed by a four-digit number as follows:

- (i) The 1st digit corresponds to the Level of M.Sc. (Professional) Program.
- (ii) The 2nd digit corresponds to the semester.
- (iii) The 3rd and 4th digit will be used to identifying a Course within the Department.

For example: PMTH 5101

PMTH	Subject Identification for M.Sc. in Mathematics (Professional) Program
5	M.Sc. Level
1= 1 st Semester 2= 2 nd Semester	Semester
01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, etc	Course Number

6. Syllabus of M.Sc. in Mathematics (Professional) Program

There will be a syllabus of the M.Sc. in Mathematics (Professional) Program for the Department of Mathematics to be prepared by the Committee of Courses of the department. The syllabus should clearly indicate the courses, credit points by semester. The syllabus will be updated by the concerned Committee, if required.

7. Duration of the Program

The M.Sc. in Mathematics (Professional) Program is a flexible program (Semi-open/Semi-closed system). The degree should be completed within three years after admission. Usually students take about one year to complete the program. A student must take two theoretical courses, one lab course and three elective courses offered in the first semester and he/she must take two theoretical courses, one lab course and two elective courses offered in the second semesters. No flexibility in taking courses for laboratory and project. Project will be offered in the second semester. Second semester has one viva-voce.

8. Registration

- (a) A student shall be required to register with the University through the University Registration process by taking minimum of 02 (two) theory courses with compulsory Lab

in a semester and on payment of the required fees as determined by the University Authority from time to time and/or as per rules.

- (b) Students are allowed to get option for late registration after getting the permission from the Program Director. In these circumstances late fee will be applicable. Second week of the semester as per the Academic Calendar will be the period of Add-Drop of courses.

9. Admission Cancellation and Withdrawal from any Course

- (a) If a student remains totally absent without any permission from all classes for 30 (Thirty) consecutive working days after the start of classes, her/his admission would be cancelled by the recommendation of the Program Director of the M.Sc. in Mathematics (Professional) Program.
- (b) A student will never take admission simultaneously in more than one program of this University or any other higher institution with an exception of Certificate/Diploma course. If the stated clause is violated, studentship, examination and examination results of the reported student shall immediately be cancelled.
- (c) After registration a student may withdraw the course/courses within two weeks after starting the classes in each semester and/or may cancel her/his studentship but s/he will have to sacrifice all course fees, semester fee except registration fee in case of 1st semester only and in case 2nd semester s/he will have to sacrifice all fees and charges including registration fee.

10. Retake of a Course/Improvements/Complete of Grades

A student obtained 'F' grade in a course will have to improve her/his grade by retaking the course on payment requisite fees in the next available batch. A student obtaining below B (3.00) grade in a course may take the chance to improve her/his grade by appearing at the semester final examination semester before the final Viva-Voce. A student will have improvement opportunity once for each course and the grade point obtained in improvement will not be more than 3.25. In case of improvement, the highest grade secured by the student will be treated as final grade and the lowest grade will be cancelled automatically.

A student obtained I (Incomplete) grade in course may take the chance to complete her/his grade by appearing at the semester final examination (50%) of that course on payment of requisite fees only in the short semester after completion course semester before the final defense of Project. Here I grade will be defined as the absent at the final examination (50%) even though participated at the different parts of the evaluation process during the semester.

11. Drop Out

If a student fails to earn required total credit points within three academic years since admission, She/he will be dropped-out from the program and will no more be allowed to continue her/his studentship with other students.

12. Credit Transfer

No credit transfer from any other Programs/Universities/Institutions to the Jagannath University is allowed for the M.Sc. in Mathematics (Professional) Program.

13. Academic Year and Semester

The academic year is divided into two semesters as follows:

Semesters	Duration
Spring	January to June
Fall	July to December

There are two classes of 1.5 hours for each course in a week (in total 30 classes in semester including two Mid-terms/Class tests/Quiz/Presentations/Assignments). Therefore, Distribution of weeks in each semester will be as follows:

- 1) Theoretical Courses (03 credit each)
 - a) Registration = 01 week
 - b) Class Teaching = 15 weeks (including Mid-term/Class test/Quiz/Presentation/Assignment)
 - c) Examination Preparatory Leave = 02 weeks
 - d) Semester-final Examination = 04 weeks
 - e) Result preparation = 02 weeks
 - f) Semester break = 02 weeks

Total = 26 weeks

- 2) Lab Courses (03 credit each)
 - a) Lab Class = 15 weeks (including Mid-term/Class test/Quiz/Presentation/Assignment)
 - b) Lab Examination = 01 week

An academic calendar will be designed by the M.Sc. in Mathematics (Professional) Program Coordination Committee at the beginning of every semester and every effort will be made to complete the courses within the period specified in the academic calendar.

14. Teaching Method

The university authority will follow the modern teaching method for its students. All classrooms are equipped with overhead projectors, multimedia devices and sound systems. In addition, multimedia overhead projectors are to be managed for class presentations by students. The medium of instruction is English.

15. Course Evaluation in the form of TER (Teaching Efficiency Rating)

Department will conduct course evaluation before the end of each semester. The objectives of course enrich the course and teaching method followed in the course. The program offices conduct the evaluation for each course through a structured evaluation forms.

16. Evaluation and Grading System

Student's performance in a course is evaluated as follows:

Component	Weight
Class attendance	10%
Mid-term	30%
Case Study/Term Paper/Assignment/Presentation/Quiz/Class test	10%
Final Examination	50%
Total	100%

The evaluation of the Mid-term paper/Assignment/Presentation/Quiz/Class test, and final examination will be completed by the respective course teacher exclusively, who will prepare grade sheet of individual course in a prescribed form and submit the result (s) to M.Sc. in Mathematics (Professional) Program Office in the Department. The respective course teacher may take special make-up mid-term test in case of emergency in the part of student on payment of requisite fee as prescribed by M.Sc. in Mathematics (Professional) Program Office of the Department.

Class Attendance: The marks allocated for class attendance shall be given as following proportions:

<u>Attendance</u>	<u>Mark</u>	<u>Example</u>
95% and above	100%	10 out of 10
90% to 94%	90%	9 out of 10
85% to 89%	80%	8 out of 10
80% to 84%	70%	7 out of 10
75% to 79%	60%	6 out of 10
70% to 74%	50%	5 out of 10
65% to 69%	40%	4 out of 10
60% to 64%	30%	3 out of 10
Less than 60%	00%	0 out of 10

Grading System: Students will be awarded with grades in each course as per the following grading policy as approved by the University Grants Commission (UGC):

Grade	Grade Point	Marks
A ⁺	4.00	80% & above
A	3.75	75% -79%
A ⁻	3.50	70% -74%
B ⁺	3.25	65% -69%
B	3.00	60% -64%
B ⁻	2.75	55% -59%
C ⁺	2.50	50% -54%
C	2.25	45% -49%
D	2.00	40% -44%
F	0.00	Below 40%
I	Incomplete*	

*Definition of incomplete has been expressed in clause 10 of this academic rules and regulations.

17. M.Sc. in Mathematics (Professional) Program Coordination Committee

The M.Sc. in Mathematics (Professional) Program Coordination Committee consists of the following members:

- (a) Program Director
- (b) Chairman of the Department (Ex-officio Member)
- (c) Member (one or two, not below the rank of Associate Professor)

Any teacher of the committee member/among the members (as mentioned in c) will act as the member secretary of the committee. The Program Coordination Committee will administer the program. The decision of M.Sc. in Mathematics (Professional) Program Coordination Committee regarding any issue of conducting M.Sc. in Mathematics (Professional) Program will be final.

The tenure of a member of the M.Sc. in Mathematics (Professional) Program Coordination Committee will be one year. The appointment of the members of the M.Sc. in Mathematics (Professional) Program Coordination Committee will be made by the Departmental Academic Committee. If any member resigns from the position due to his/her personal reason(s)/study leave/deputation before the tenure of one year, he/she will not enjoy this opportunity (membership for the remaining period). The Coordination Committee will be reformed (as per recommendation of departmental Academic Committee).

18. Examination Procedures

Formation and Function of the Examination Committee: The M.Sc. in Mathematics (Professional) Program Examination Committee will be formed by the Departmental Academic Committee for each academic program consisting of two semesters. The Examination Committee will be composed of four members (one chairman, three internal members). In case of any vacancy, absent or inability on the part of any one of the members of the examination committee, the examination work will not be invalidated. However, if available, Chairman of any examination committee must not be below the rank of Associate Professor.

The examinations committee shall take the necessary step to conduct the examination smoothly and prepare the final result in each semester (as per the rules and regulation of Jagannath University).

Maximum of one officer, one office assistant, one lab attendant and one MLSS (as office-staff) will assist the M.Sc. in Mathematics (Professional) Program Examination Committee to conduct program activities smoothly. The appointment of the office staffs of the M.Sc. in Mathematics (Professional) Program will be made by a committee formed by M.Sc. in Mathematics (Professional) Program Coordination Committee.

The M.Sc. in Mathematics (Professional) Program Coordination Committee is responsible for the following takes:

- (a) Overall co-ordination of the Program
- (b) Assignment of duties and responsibilities to each member of the committee
- (c) Monitoring of examinations
- (d) Checking course outlines
- (e) Administration of the evaluation of TER forms for teacher as designed by the M.Sc. in Mathematics (Professional) Program Coordination Committee
- (f) Preparation of budget and maintenance of accounts
- (g) Making arrangement for the audit of accounts
- (h) Submission of periodical reports to the departmental academic committee
- (i) Circular for Admission
- (j) Ensuring logistic support
- (k) Recommendation for awarding degree
- (l) Designing and approving of teacher's evaluation form

20. M.Sc. in Mathematics (Professional) Program Admission Committee

The M.Sc. in Mathematics (Professional) Program Admission Committee as follows:

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|-------|---|--------------------|
| (i) | Program Director of the Co-ordination Committee | = Convener |
| (ii) | Professor | = One Member |
| (iii) | Associate Professor | = One Member |
| (iv) | Members of the Co-ordination Committee | = Two Member |
| (v) | Chairman of the Department | = Member-Secretary |

Member of this committee will oversee the program and will conduct the admission test procedures every semester and will set sub policies of the academic rules and regulations specifically regarding financial, admission matters, number of seats and other related matters. The Program Admission Committee will get an honorarium for conducting admission test.

The tenure of a member of the M.Sc. in Mathematics (Professional) Program Admission Committee will be one year.

The appointment of the members of the M.Sc. in Mathematics (Professional) Program Admission and Coordination Committee will be made by the Departmental Academic Committee.

21. General Fees and others Charges:

According to the decision of the Jagannath University, the M.Sc. in Mathematics (Professional) Program is conducted by the Department of Mathematics as a self financed program and fee structure for students enrolled in the program, as approved by the Department of Mathematics and Jagannath University is as follows:

Fee and Charges Structure

No.	Areas	Amount
1	Admission Form	: Tk. 1,000 (at the time of admission)
2	Registration Fee	: Tk. 10,000 (at the time of admission)
3	Semester Fee	: Tk. 4,500 (each semester)
4	Seminar Fee	: Tk. 3,000 (each semester)
5	Lab Fee	: Tk. 3,500 (each semester)
6	Course Fee (Total 38 Credit)	: Tk. 3,000 (per credit)
7	Improvement/Incomplete	: Tk. 2,000 (per course)
8	Make-up Mid-term Examination Fee	: Tk. 1,000 (per course)

- All fees and charges are subject to change.

22. Seat Capacity:

Hundred (100) students will be admitted in one intake (class size will be of maximum 50 (fifty) students). Number of students/seats may be changed in course of time.

23. University Fund and Departmental M.Sc. in Mathematics (Professional) Program Administration Fund:

According to the university financial rules for M.Sc. (professional) programs all the charges will be transferred to the Departmental M.Sc. in Mathematics (Professional) Program Coordination Fund (Seminar fee and Lab fee will be deposited to Department of Mathematics). The Departmental M.Sc. in Mathematics (Professional) Program Coordination Committee will bear all expenses for administering program according to the set rules set by the M.Sc. in Mathematics (Professional) Program Admission and Coordination Committee. Program Director and Chairman of the Department (as Ex-Officio Member) of M.Sc. in Mathematics (Professional) Program Coordination Committee jointly operate the Departmental M.Sc. in Mathematics (Professional) Program Coordination Fund. The contribution from M.Sc. in Mathematics (Professional) Program to the University Fund will be used to infrastructure development of the Faculty of Science.

24. Addition, Alternation, Changes or Modification in the Academic Rules and Regulations:

In order to make any addition, alternation, change or modification in the academic rules and regulations (if required), it must be placed to the Departmental Academic Committee and the Academic Council for Approval.

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The Draft of this Rules and Regulations for M.Sc. in Mathematics (Professional) Program of department of Mathematics, Jagannath University has been prepared by the following Committees:

- a. Academic Committee of the Department of Mathematics
- b. Planning Committee of the Department of Mathematics