

Academic Guidelines

2022-2023

2 Year MS Programme



Indian Institute of Science Education and Research Kolkata

To be implemented from MP22 batch of students

General Guidelines

This program is presently offered by the Department of Mathematics and Statistics (DMS) and the Department of Chemical Sciences (DCS). However, other departments may also offer this programme in future. The following are the details of the program run by the DMS and the DCS, and will be updated as and when other departments decide to offer this programme.

1. Introduction

Master of Science (MS) programme is a programme launched in the Academic Year 2022- 2023 offering a Master's degree in a period of 2 years. It will extend an immersive and flexible learning experience to bright undergraduate students selected competitively from across the country. The programme has an increased emphasis on course-work with research experience gained through a project in the second year. The programme aims at providing young motivated individuals with a rigorous training, desired level of scientific understanding, and a glimpse of global contemporary research at an early stage to enable them to pursue a career in teaching, innovation and scientific research and development. It must be mentioned here that the maximum tenure of studentship is 3 yrs.

2. Details

- i. Name of the Program: Master of Science
- ii. Major: Mathematics / Chemical Sciences
- iii. Duration: 2 years (4 semesters)
- iv. Total Credit:
Department of Mathematics and Statistics: 80
Department of Chemical Sciences: 96

3. Course Structure

For a list of courses and the semester structure, please refer to the 'Courses of Study' document in the Institute's website under 'Academic' tab.

4. Levels

4.1. Level 1:

In the first year, only core courses are offered.

4.2. Level 2:

In the final year, a student has to do a dissertation (research project) along with some advanced courses. The project work will be evaluated on the basis of the project report and a seminar.

There will be departmental electives (which have to be chosen from among the electives offered by the major department), and open electives (which can be chosen from any department). Details of the core, departmental elective and open elective courses have to be obtained from the ‘Courses of Study’ document.

5. MS Project carried outside the Institute

- i. Normally the 2nd year project should be done within IISER Kolkata. However, if the Institute does not have faculty in the area of interest of a student, he/she may be allowed to do the final year project outside the Institute provided the coursework is not hampered, and a co-supervisor from the parent department of IISER-K is allotted. In case supervisor is not from IISER-K, the Co-Supervisor from IISER-K will be accountable for ensuring completion of academic requirements of a student as per IISER-K rules.
- ii. In case a student wishes to do a part of the project work in another Institute in India or abroad, he/she should submit expression of interest in the field of proposed research, offer letter from the host Institute and/or MoU (in case of foreign universities) and financial statement, on the basis of which the concerned UGAC Convener and the Department will forward the request to DoAA. In such a case, the concerned Department should have a Co-supervisor who will be accountable to ensure that the academic requirements of the student are fulfilled as per IISER-K rules.
- iii. A student must give a presentation upon his/her return and submit a report to DoAA, duly forwarded by the concerned Co-Supervisor, the UGAC Convener and the HoD.

6.

Course Policy

The curriculum of MS, 2 years in duration, consists of 4 semesters of course work. In the 4th semester one may avail the option to choose two elective courses along with a master’s project. Details of the course work are provided later in this document.

6.1. [Examination]

The following sections detail the usual practice of planning, conducting and evaluating examinations.

- 6.1.1. Mid-semester examination duration will be 90 minutes, and end-semester examination duration will be 2 hrs 30 minutes. However, for 2nd year, the instructor may choose a different mode of evaluation which will be intimated to the Academic Office as well as to the students

within a fortnight of the beginning of a Semester. Both mid-semester and end-semester examinations will be centrally conducted by the Academic Office.

Generally, the weightage of mid-semester examination is 30, end-semester examination is 50 and the internal assessment is 20. Teachers may conduct class tests, quizzes, and may give assignments for evaluation of the internal assessment component.

- i. The Instructor(s) of a course will be the paper-setter(s) and examiner(s) for the course. In case of multiple Instructors for a course, the HoD (or HoDs for courses offered by multiple departments) will designate a principal examiner who will communicate the information to the Academic Office. The principal examiner will have the responsibility of getting the question paper set in consultation with other instructor(s) of the course, communicating with them at all stages and finally submitting the grade.
 - ii. The Academic Office will be responsible for providing attendance sheet, blank answer-scripts, extra-sheets and other stationery items. The principal instructor will be responsible for bringing the question paper in necessary number to the examination hall, and for collecting the answer-scripts after counting and recording at the Academic Office counter. An instructor can submit the question paper along with the required number of photocopies to the Academic Office in a sealed envelope, if he/she thinks so.
 - iii. Two copies of the question paper will have to be signed by the (principal) examiner and deposited in the Academic Office counter. One of these will be kept for official record and the other will be made available in the Library. The faculty member should provide the Academic Office with a soft copy of his/her mid-semester and end-semester question papers for record.
 - iv. Adequate number of (faculty) invigilators will be provided in the examination halls. Non-teaching staff will also be deputed in the large examination halls to assist the invigilators in distributing answer-scripts, question papers, extra sheets, threads, etc., and in ensuring that more than one student appearing in examination of a subject cannot be outside the hall at any time. Carrying out the assigned invigilation duty is mandatory and substitution of (faculty) invigilators by students is not permitted.
 - v. Evaluated answer-scripts of mid-semester exams must be shown to the students within 15 days after the examination. Evaluated answer-scripts of end-semester examination will be made available for viewing before the submission of grades.
 - vi. Class tests, assignments, tutorials, viva voce, laboratory assignments, projects, etc. are important components of continuous assessment process, and a student must fulfil all these requirements as prescribed by the Instructor.
 - vii. Laboratory examinations should be completed before the start of the end-semester theory examination. The dates will be mentioned in the Academic Calendar.
- 6.1.2. [Failure]** In the first year, a student can fail at most in one course. A student is expected to clear the backlog in the supplementary examination to be held after one year during the regular end-semester examination.

In the second year, a student can fail in at most one course and he/she has to clear the backlogs at the end of the Spring semester (within a period of 10 days from the end of the end-semester exam).

6.1.3. [Supplementary examination and Make-up examination]

- i) The supplementary exam of a particular course will be held after one year during the regular end-semester examination of the same course when it is offered next time. In the case of clashes with exam timetable, the exam will be arranged at mutually convenient times for the teachers and the students. The supplementary examination will take place even if the course is not offered in that semester; this will also be held with the regular end-semester examinations.

For final-year students, the supplementary examinations will take place at the end of the Spring semester (within a period of 10 days from the end of the end-semester exam).

Students who are unable to appear in the end-semester exams due to medical conditions may clear their backlog examinations during the next semester break at a mutually convenient time for the teacher and the student.

- ii) Supplementary Examination will be conducted by the respective departments. Academic Office will hand over the attendance sheets, answer-scripts and other stationery items to the departments before commencement of the exam.
- iii) The students should be graded on the basis of the marks obtained out of 100. The marks obtained in the mid-semester exam and the internal assessment may or may not be considered while awarding the grade (it is the prerogative of the instructor). Students will be given a grade one step lower than the grade obtained in the supplementary exam. However, if one obtains a D grade, it will not be lowered to F. The downgrading procedure will be done by the Academic Office. Academic Office will consider the Grade Range of the allotted Grade and enter its mid-value in the Tathya System.
- iv) Make-up examinations will be conducted, either separately or along with the supplementary examinations, for students who could not appear in the end-semester examination due to serious medical reasons (like hospitalization). Their grades will not be downgraded. A case will be considered as make-up only if a student goes to the Medical Unit and the Institute's doctor strongly recommends n number of days' rest during the examination period. In case of hospitalization or an ailment that requires a student to stay off-campus, the medical certificate from external doctors, endorsed by the Institute doctor, may be considered. For psychological cases, endorsement from the Institute's Mind Care and Wellness Centre (MCWC) should also be considered.
- v) Supplementary examinations for laboratory courses will be conducted during the summer vacation, where the experiments will have to be done by the student as a summer course. If

the concerned faculty member is absent, the Head of the Department will nominate some other faculty member to conduct the examination. A student failing in a laboratory course will be detained for a year. Monetary compensation will be provided to the instructors for taking the extra lab classes during summer.

7. Grading System

7.1. As a measure of students' performance, a 10-point grading system using the letter grades and corresponding grade points is adopted.

- i) By default the following range of marks are related to the grades: A+: 90-100, A: 80-89, B+: 70-79, B: 60-69, C: 50-59, D: 40-49, F: <40. The instructor may change these ranges in the WeLearn system to obtain a proper distribution of grades.
- ii) In case a student does not appear in the end-semester examination due to medical reasons, 'Incomplete' (I) grade will be indicated on the grade card, to be replaced by proper grades after the make-up examination. In case a student is debarred from appearing in the end-semester examination due to poor attendance, failure ('F' grade) will appear in the transcript.
- iii) The grades obtained are related to the following 'Grade Points':

Grades	GP
A+	10
A	9
B+	8
B	7
C	6
D	5
F	0

A Semester Grade Point Average (SGPA) will be computed for each semester by the formula

$$SGPA = \frac{\sum_i C_i G_i}{\sum C_i}$$

Where C_i is the credit for the i th course and G_i is the grade point for the same course. The sum runs over all the courses the student is required to take for the semester. The SGPA will be rounded off to the second decimal place. The SGPA reflects the student's performance for the semester.

At the end of the S th semester, a Cumulative Grade Point Average (CGPA) will be computed for every student as,

$$CGPA = \frac{\sum_{i=1}^m C_i G_i}{\sum_{i=1}^m C_i}$$

where m is the total number of courses the student has registered from the first semester onward up to and including the semester S , C_i is the number of credits allotted to a particular course and G_i is the grade-point corresponding to the letter grade awarded to the student for the course. The CGPA will be rounded off to the second place of decimal. The CGPA would indicate the cumulative performance of the student from the first semester up to the end of the semester which it refers to.

- iv) When a student gets the grade 'I' for any subject(s) during a semester, the SGPA of that semester and the CGPA at the end of that semester will be tentatively calculated ignoring these subjects. After the 'I' grades have been converted to appropriate grades, the SGPA and the CGPA for that semester will finally be recalculated after taking into account these grades.
- v) When a student gets the grade 'F' in any course during a semester, the 'F' grade will be appropriately replaced by the new grade obtained through a supplementary examination. In case of failure in supplementary examination, the SGPA and the CGPA will be calculated taking 'zero point' for each such 'F' grade. If the 'F' grades are substituted by other grades obtained in the supplementary examination, the SGPAs and the CGPA will be recalculated on the basis of acquired grades.

7.2. Grading policy for detained students: Students who have been detained have to repeat all theory courses. They will not be allowed to repeat the laboratory courses which they have already passed. If a student passes after repeating a course, the best grade obtained from two/three attempts will be reflected in the transcript; but in case of failure, the transcript will reflect F grade.

8. Attendance

- a) Instructor may decide to debar a student from appearing mid-semester and/or end-semester examination if attendance falls below 60%. This will be implemented from Spring Semester 2023.
- b) Instructors must inform the Academic Office at the beginning of the semester about their plan and weightage distribution of attendance, exam, assignments, etc., and whether the attendance component will have any bearing on examination eligibility.

9. Policy of Promotion of a Student

- i) A student will be promoted to second year provided he/she does not have more than one backlog in first year.
- ii) If a student fails in a laboratory course, he/she will have to clear it during the subsequent summer recess. If he/she fails again, he/she will not be promoted to the next level.
- iii) In case a student gets poor grades in a year, he/she may voluntarily choose to repeat a year to improve the CGPA. In that case the above rules for year repeat will apply and he can do it only once in the whole duration of the programme.
- iv) A student will have a maximum of three opportunities of passing a course (the regular end semester examination and two supplementary examinations) in case of first year and a maximum of two opportunities (the regular end semester examination and one supplementary examination) in case of second year. In case of failure in three attempts, his/her studentship will be terminated.
- v) In case of failure in an elective course after first supplementary exam, the student will have an option of choosing a different elective in the next semester (provided there is no time table clash). He/she will have to clear it in one attempt, failing which he/she will be terminated from the programme.
- vi) If a student gets promoted with some backlog course, and the syllabus is changed in between, he/she will appear for the examination in the old syllabus. The Instructor who had taught the course (in which he/she has failed) should be the examiner for the course. If the same Instructor is not available, the Head of the concerned Department will assign an alternate examiner. Students of a previous batch with carry-over backlog in a certain course may appear in the supplementary exam with students of the current batch, to be conducted by the instructor of the current batch.
- vii) A student will have to clear all courses and has to earn the requisite number of credits in order to be eligible for the award of the final degree from the Institute.

10. Academic Feedback

The Institute strives to improve knowledge delivery continuously, and periodically reviews and updates the curriculum. Students' feedback on the courses and the instructors is invaluable in that process. It is mandatory for students to submit academic feedback.

- a) The end-semester feedback will be of 15 days duration, and a reminder will be sent after seven days.

- b) Moreover, the feedback score will be generated only from the feedback of the students who have 60% or above attendance.

11. Academic Warning and Academic Probation

“Academic warning” is given to a student at the end of a semester if he/she earns an SGPA less than 5.0 for that semester. If the student gets an SGPA below 5.0 in the next semester also, he/she will be placed on “academic probation” for the following semester. If the student continues to earn SGPA less than 5.0 consecutively in the 3rd semester, his/her studentship will be terminated.

“Academic warning” is an indication that the student’s performance has fallen below the Institute’s requirement for “good academic standing”. Students who receive an academic warning are encouraged to develop a plan for academic improvement. For them, seeing the Counsellors at the MCWC is mandatory.

12. Counselling for students performing below expectations

The MCWC under the supervision of the DoSA will look after the needs of the students who are not performing up to expectations. After the mid-semester examination, each faculty member should provide the names of the students who have not performed well in the examination and/or students who have a poor record of attendance. The Academic Office will intimate the names of such students to the DoSA for initiation of appropriate counselling. The MCWC should inform the guardian about the shortcomings of the student. When a student remains absent from classes for a longer period (more than a week), the Instructor-in-charge should send the name(s) of the student(s) to Academic Office which may forward these names to the Counselling Cell for further action.

13. Termination of Studentship

A student will have to forfeit the course if at least one of the following happens:

- i) He/She earns SGPA less than 5.0 for three consecutive semesters.
- ii) A student will have a maximum of three opportunities of passing a course (the regular end semester examination and two supplementary examinations) in case of first year and a maximum of two opportunities (the regular end semester examination and one supplementary examination) in case of second year. In case of failure in three attempts, his/her studentship will be terminated.
- iii) In case of failure in an elective course after first supplementary exam, the student will have an option of choosing a different elective in the next semester (provided there is no time table clash). He/she will have to clear it in one attempt, failing which he/she will be terminated from the programme.

14. Protocol for choice of supervisor for MS project

14.1. Choice of supervisor for MS project:

- i. The UGAC convener of a particular department will contact all the 2nd year MS students asking for their preferred MS project supervisor. The students will send names of three faculty members according to preference
- ii. On receipt of all the preferences, the UGAC convener of the department and the HoD will consider the first preference of a particular student and the HoD will contact the respective faculty member to take his/her opinion. If the faculty member agrees to take him/her, then the student will be assigned to that faculty. If the faculty member does not want to take the student, then the student's second preference is explored and so on.
- iii. Each faculty member must take at least one 2nd year project student in his/her group, if the number of students is more than the number of faculty members in the department. Depending on the number of students in a department, the HoD will decide the maximum number of students a faculty member can take in a particular year. However, this number should not exceed 4.

14.2. Final year MS Project Report:

The submission of Masters' project report by the final year MS students will be fully online. Once a student submits the project report file, the same will be endorsed by his/her supervisor in the same portal after getting a satisfactory plagiarism check from the Library. The final files of all outgoing students will be shared with the Library.

The Library will assign a unique *url* to the project report, which would be available for downloading 6 months after submission. Special requests regarding extension (not more than 1 year) for project report downloading may be placed to the DoAA. The reports should be made available online based on mutual consent of both student and advisor. A consent from the student and the supervisor(s) must be taken that the Institute will have the right to keep a copy of the project report.

14.3. Format:

MS Project Report should be submitted in pdf format (not doc or docx). The certificate page should contain the signature of the supervisor, which can be scanned and inserted in the pdf file.

- i. Font type and Size: Times New Roman, 12 point.
- ii. Line Spacing: 1.5
- iii. The front page should have the following information with centre alignment:
 - (a) Title of the Thesis
 - (b) Name of the degree
 - (c) Name of the student
 - (d) Roll No. of the student
 - (e) Name of the Supervisor
 - (f) Name of the Co-Supervisor if any

- (g) Name of the Department
- (h) Name of the Institute with its Logo
- (i) Month, Year
- iv. Declaration of the student with his/her signature on academic integrity and copyright. (For template please refer to 6.20.4)
- v. Certificate of the Supervisor with his signature. (For template please refer to 6.20.5)
- vi. Acknowledgment (not more than two pages)
- vii. Dedication (optional)
- viii. Abstract
- ix. Chapters, starting with ‘Introduction’ and ending with ‘Conclusion’
- x. References

15. Award of the MS Degree:

On receipt of the approval of the Senate, the MS degree may be conferred in the next convocation after course completion.

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