

ACADEMIC GUIDELINES 2020

BS-MS Programme



2. 5 Year BS-MS Dual Degree Programme

2.1 Introduction: IISER Kolkata offers a Bachelor and Masters (BS-MS) Dual Degree Program wherein a unique training programme is offered to students through a balanced schedule of class room lessons, project and research work. While the Institute aims to comprehensively train the students in each of the major subjects, much attention is also directed to the development of an inter-disciplinary perspective.

2.2 Credit structure: The number of credits will be approximately the same as the number of contact hours per week. The 4-credit courses will include three hours of teaching and 1 hour of tutorial (or an equivalent length of time devoted to term paper, assignments, etc.). For a distribution of credits across semesters, the core and elective courses to be taken, etc., please refer to the 'Courses of Study' document. Since there has been a curricular revision, the requirements for the MS16 and MS17 batches are different from the MS18 and other batches.

The total number of credits required for the award of the BS-MS degree will be 253 credits for DPS, DES, DCS, and DBS, and 229 for DMS, with effect from the MS18 Batch. It remains 250 for the MS16 and MS17 batches.

2.3. Levels

2.3.1 Level 1:

The first level of the 5 Year BS-MS Dual Degree Program will have 29 credits in each semester in the following courses:

- i. Courses in five disciplines of basic sciences viz., Biology, Chemistry, Earth Science, Mathematics & Statistics, and Physics
- ii. All students have to attend courses on 'Mathematical Methods', 'Communicative English', and 'Introduction to Philosophy'. The first year students will be divided into two batches depending upon their level of exposure to English. In the 1st semester Batch A will register for Communicative English while Batch B will learn Introduction to Philosophy. In the second semester, Batch A will learn Introduction to Philosophy while Batch B will learn Communicative English.
- iii. CNR Rao Foundation Prize: The prize is given to the best performing student of the first year. A certificate and cash prize is given twice in a year to the student scoring the highest CGPA in the semester.

2.3.2 Level 2:

- i. At this level students have to choose three 'Pre-Major' disciplines.
- ii. In the 2nd year 1st semester one has to earn 7 credits in each pre-major subject and a compulsory Mathematical Methods course of 3 credits. Total credit in the 2nd year 1st semester will be $7 \times 3 + 3 = 24$.
- iii. In the 2nd year 2nd semester, a student has to do 8 credits in each pre-major subject and a compulsory Computer Science course of 3 credits, totalling $8 \times 3 + 3 = 27$ credits.

2.3.3 Level 3:

- i. In the third level, students are required to choose a 'Major' discipline from the three pre-major disciplines chosen in the second level.
- ii. Each Department will specify the maximum number of students they can accommodate in a particular academic year, by taking into account the laboratory facilities and faculty strength. However, this number cannot be less than 25% of the total number of students enrolled in the second year of that particular year.
- iii. Each department may set pre-conditions of allowing a student to take that major discipline, and the allotment will be subject to meeting these pre-conditions. For choosing the major, a student must clear all the relevant pre-requisite courses in the previous four semesters.
- iv. If a student is unable to qualify for any Major after the second year owing to multiple failures or does not qualify for the major of his/her choice, he/she will be detained in the second year. In that case conditions of detainment (refer to "Promotion Policy" vide Point 1.15) will be applied. He/she may seek permission to change the pre-major disciplines.
- v. In order to get major in any discipline, a student must have cleared all courses offered by that department in the first and second levels.
- vi. A student can change his/her Major within a week from the start of the 5th semester, provided he/she satisfies the requirements of that department.
- vii. Students will have to take five core courses from the selected discipline (major). In addition, one course is to be chosen as elective, which must be a theory course. The elective course may be chosen from the same department or from another department that the student chose as pre-major in the 2nd level. A student cannot take a laboratory course as elective (excepting computer lab, which is equivalent to a theory course). Students should seek the advice of the departmental UGAC members in choosing the electives.
- viii. A student will have to take at least one HSS course in the 3rd and 4th levels.

2.3.4 Level 4:

In the fourth year, core and elective courses are offered. 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 including the major department). Details of the core, departmental elective and open elective courses have to be obtained from the 'Courses of Study' document. A student will have to take at least one HSS course in the 3rd and 4th levels. This will be applicable from the MS17 Batch.

2.3.5 Level 5:

In the fifth 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.

2.3.6 Earning a Minor: In 3rd to 5th levels students may choose open elective courses from any department. One can earn a 'Minor' in a second discipline if (a) he/she had taken that discipline as pre-major in the 2nd level and (b) he/she earns an additional 12 credits in the 3rd-5th levels in subjects offered by that department. The earned 'Minor' will be mentioned in his/her Degree Certificate. Apart from DPS, DMS, DCS, DES, and DBS, one can also earn a Minor in Computer Science and Humanities and Social Sciences.

2.3.7 Earning a Major: A minimum of 120 credits in core and departmental elective courses of the 3rd – 5th levels will be required to earn a Major in a subject for the DBS, DES and DPS. For DMS, a minimum of 96 credits in core and departmental-electives earned in the 3rd-5th levels will be required. For DCS, a minimum of 128 credits in core and departmental-electives earned in the 3rd-5th levels will be required. This is effective from MS18 batch.

For the MS17 batch, requirement remains earning 120 credits in core courses of the 1st- 5th levels of all departments.

2.4. MS Project carried outside the Institute:

- i. Normally the 5th 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 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 Department will forward the request to DoAA.
- iii. A student must give a presentation upon his/her return and submit a report to DoAA, duly forwarded by the concerned supervisor, UGAC Convener and HoD.
- iv. If a student is required to do some coursework in a semester in addition to the project, that course can be done as an “independent study” course with special permission from the DoAA (provided there is no other 'Independent Study” course to be taken that semester). The student will have to appear in the end-semester examination and will be evaluated on the basis of that examination alone.

2.5. Independent Study:

A student may choose a course for ‘Independent Study’ which is not offered by the Institute as a taught course. One cannot do this course in the same area in which he/she is doing the final year project.

2.6. Examination:

The following sections detail the usual practise of planning, conducting and evaluating examinations. However, under the current circumstances, the Autumn 2020 semester will be started with online teaching; will enforce continuous evaluation instead of the mid-semester examination; and is subject to changes.

- a) Re-evaluation examinations for Spring Semester 2020 will be conducted in offline classroom mode and not online, since several students had faced internet issues when the examinations were held online. Those examinations will be held in December-end or whenever the students return to the campus.
- b) Supplementary examinations for current 1st – 4th year students (MS19 - MS16 batches) will also be held as written examination in classroom setting. However, considering the fact that the current 4th year students would start applying for PhD programmes in their 5th year, their

supplementary examinations may be held earlier. If they return to the campus by October, the exams will be conducted soon after they return. But if their return is delayed further, it may be conducted online as a special case. The DoAA is empowered to take the final decision depending on how the COVID-19 situation evolves.

2.6.1 Mid-semester examination duration will be 90 minutes for 1st to 3rd years. For advanced-level courses offered in the 4th and 5th years, the instructor may choose a different mode of evaluation which will be intimated to the Academic Cell as well as to the students at the beginning of a Semester. If the instructor does not choose a different mode of evaluation, the mid-semester examination will be conducted along with other batches.

End-semester examination duration will be 2 hours 30 minutes. Both Mid-semester and End-semester examinations will be centrally conducted by the Academic Cell.

In addition, 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 and will communicate the information to the Academic Cell. 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 Cell will be responsible for providing attendance sheet, blank answer-scripts, extra-sheets and other stationery. 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 Cell counter.
- iii. Two copies of the question paper will have to be signed by the instructor and deposited in the Academic Cell 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 Cell with a soft copy of his/her mid-semester and end-semester question paper 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 PhD students is not permitted.
- v. Evaluated answer-scripts of mid-semester exams will 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. Appearing in the end-semester examinations in every course is compulsory. If one does not appear for the end-semester examination, his/her result will be incomplete (reflected as 'I' grade).
- vii. Laboratory examinations should be completed before the start of the end-semester examination. The dates will be mentioned in the Academic Calendar.

2.6.2 Supplementary and Make-up Examinations

- i. If a student fails in an examination, he/she will have two more opportunities of clearing the backlog through supplementary examinations conducted during the summer vacation of two consecutive years (not appearing in supplementary examination will also be considered as losing one chance of passing the course).
- ii. Students with any backlog will have to stay back on campus during the summer vacation (i.e., they should not undertake summer internship). They should take help from the teachers, use the library, and prepare for the examination. Whenever possible, the departments will also offer remedial courses (where there are more than 10 failure cases in a course) to enable these students to learn the subject.
- iii. The supplementary examinations will be conducted in a window to be announced by the DoAA. Under special circumstances (e.g., the instructor is outside the country during this period), the DoAA may give permission to conduct the exam as per the instructor's convenience within the period of the summer vacation.
- iv. Summer Supplementary Examination will be conducted by the respective departments. Academic Cell will hand over the attendance sheets, answer-scripts and other stationery to the departments before commencement of the exam window.
- v. The students should be graded on the basis of the marks obtained out of 100. The marks obtained in the mid-semester exam and 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 Cell. Academic Cell will consider the Grade Range of the allotted Grade and enter its mid-value in the Tathya System.
- vi. 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. In case of hospitalization or an ailment that requires a student to stay off-campus, the medical prescriptions 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.
- vii. Lab course supplementary exam: 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 Chairperson 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.

2.6.3 Completion of semester evaluation:

- i. Grading should be done within 5 working days from the date of respective examination. However, for courses having more than 100 students, grades may be submitted within 7 working days.
- ii. After the grades are submitted, if any error in marking/grading is detected, the Instructor may request the grade change in writing to the DoAA with proper justification within 7 days of submission of the grades. Any proposal for change of grade beyond that period will have to be approved by the Chairman, Senate. A specific Grade Change form is to be used for this purpose which will be available from the Academic Cell.

2.7. Grading System:

2.7.1 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+: 91-100, A: 81-90, B+: 71-80, B: 61-70, C: 51-60, D: 41-50, F: <40. The instructor may change these ranges in the We Learn system to obtain an even 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

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

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. The CGPA, the SGPA and the grades obtained in all the subjects in a semester will be communicated to the students after the end of every semester (provided he/she has submitted all the course feedbacks).

- 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.

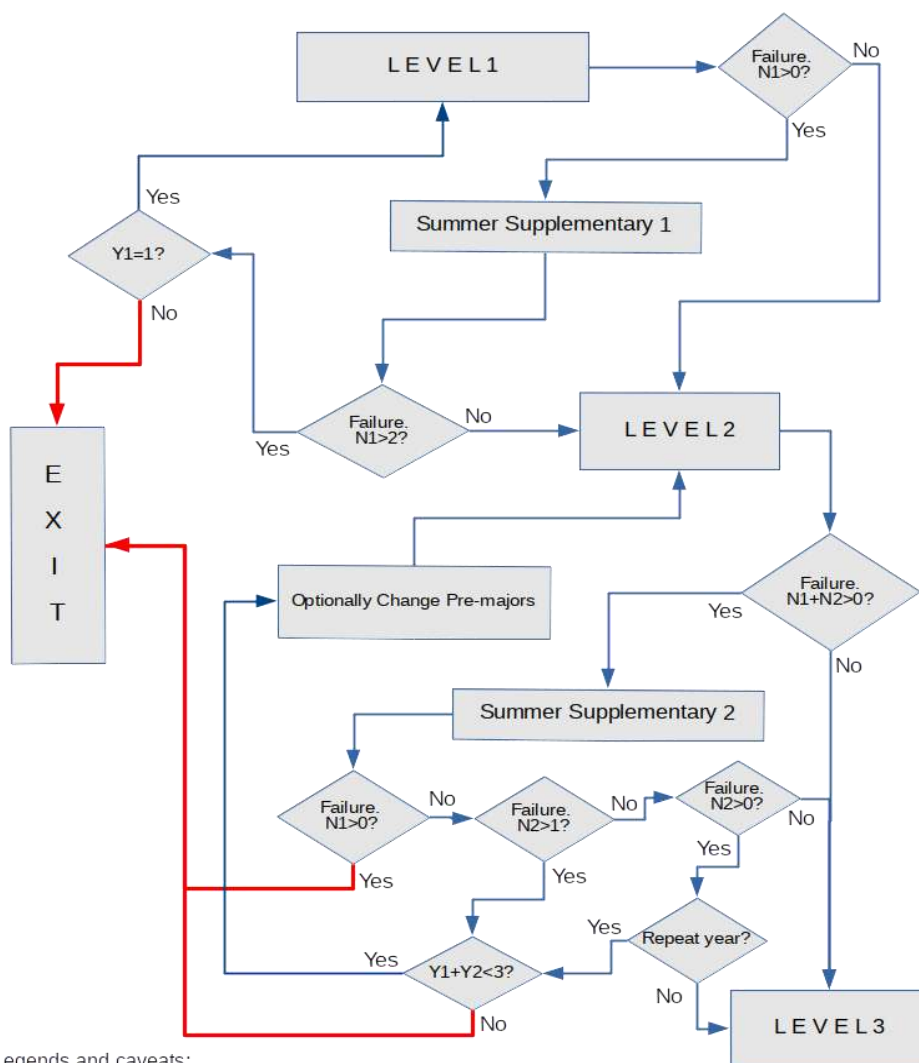
2.7.2 Grading policy for detained students: Students who have been detained have to repeat all theory courses. They will not be allowed to repeat the laboratory courses which they have already passed. If a student passes after repeating a course, the best grade obtained from two/three attempts will be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

2.8. Policy of Promotion of Students:

- i. A student will be promoted to the next level, provided he/she does not have more than two backlogs in theory courses after supplementary examinations which he/she has to clear during supplementary examination of the following summer.
- 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. If a student is detained in the 2nd level, he/she will have the option of changing the pre-major. In case there is only one backlog at the end of the 2nd level, the student may opt to be promoted (provided he/she clears the requirements of getting a major), with the undertaking that if he/she fails to clear the backlog in the subsequent summer supplementary examination, his/her studentship will be terminated.
- iv. 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.

- v. 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 failure in three attempts, his/her studentship will be terminated.
- vi. 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 two attempts, failing which he/she will be terminated from the programme.
- vii. 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.
- viii. 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.

Flow Chart for L1 and L2 promotion



Legends and caveats:
 N1 = no of failure in L1
 N2 = no of failure in L2
 Y1 = total no of years spent in L1
 Y2 = total no of years spent in L2
 Repeat Year : Best of two grades for L2
 To Level 3 with backlog: only one supplementary in L3

N.B. Students earning SGPA less than 5.0 for three consecutive semesters will be terminated unless they can improve the SGPA through the subsequent summer supplementary exam.

2.9 Academic Feedback: The Institute strives to improve knowledge delivery continuously, and periodically reviews and updates the curriculum. Students' feedback on the courses and instructors is invaluable in that process. It is mandatory for students to submit academic feedback. Semester results will be withheld for those who do not submit course feedbacks. For attendance defaulters, teaching feedback will be considered without the numerical score.

2.10 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.

2.11 Counselling for students performing below expectations:

A ‘Mind-care and Wellness Centre’ (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 Cell 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 the Academic Cell which may forward these names to the Counselling cell for further action.

2.12 Termination of studentship:

2.12.1 The following situations will lead to termination of studentship.

- i. A student fails in any course even after three attempts.
- ii. A student fails to meet the criteria of being promoted to the next level after spending two years in a certain level.
- iii. A student fails to clear the 1st and 2nd level courses in 3 years and has more than one backlog.
- iv. A student fails to complete the requirements of the BS-MS degree in 7 years.
- v. A student earns SGPA less than 5.0 for three consecutive semesters. However, the student will get a last chance in the subsequent summer supplementary to improve the SGPA.

2.12.2 A student can appeal against a termination notice to the Chairperson, Senate.

2.13 MS to PhD Switch over: A student can apply for switch-over from BS-MS to PhD program of the Institute any time after the commencement of 5th year of the program. Students of the MS by Research Programme may also apply for switch-over.

- i. The student must have CGPA of 8 or more at the time of switch over, and must maintain a CGPA above 8 until the end of the 5th year. In case the CGPA of the student falls below 8, his/her candidature as a PhD student will be cancelled.
- ii. BS-MS students may apply for "BS-MS to PhD switch over programme" till the end of their 10th semester.

- iii. Their selection interviews will be conducted along with the selection interviews of the new PhD applicants. The respective department will conduct their selection interviews.
- iv. The students thus inducted into the PhD programme are encouraged to bring their own fellowships from external funding agencies like CSIR, UGC, INSPIRE. Until a student secures funding from some external agency, he/she will be considered as an Institute Fellow, and will be subject to the rules pertaining to the Institute Fellowship.
- v. For these students coursework will be waived except the Research Methodology Course (if not done during MS course work).

2.14. Continuation of Fellowship:

- i. The fellowship rules are governed by the respective funding sources like INSPIRE or KVPY. At the end of every semester, the Academic Cell will communicate the students' results to the funding agencies, and the decision to continue / discontinue fellowships entirely lie with them. IISER Kolkata has no say in this matter.
- ii. Students are also intimated by the Academic Cell on scholarships available during the Academic year on the National Scholarship portal and JKPMSS. Students can submit applications on the portal to respective funding agency based on eligibility criteria. The verification of applications is done by the Academic Cell.

2.15 Protocol for choice of supervisor for MS project and selection of best MS Project Report

2.15.1 Choice of supervisor for MS project

- i. The UGAC convener of a particular department will contact all the 5th year BS-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 HoD will consider the first preference of a particular student and HoD will contact the respective faculty member to take his/her opinion. If the faculty member agrees to take him/her, then that 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 5th year project student in his/her group. Depending on the number of students in a department, HoD will decide the maximum number of students a faculty member can take in a particular year.

2.15.2 Choosing the best MS Project Report:

- i. There will be an award for the best thesis and another for the second best thesis from each department.
- ii. Each department will make a few committees comprising faculty members with different expertise, headed by a Convener. The total number of BS-MS students will be equally divided in groups to present their work in front of those committees one at a time. Each committee will suggest three names that will compete for the best thesis award.
- iii. An apex committee comprising the Convenors of each committee, the members of the departmental UGAC and external experts chosen by the UGAC will finally select two students.

2.16 Final year MS Project Report:

Only electronic versions of MS Project Reports may be submitted. No print version needs to be submitted. After a thesis is passed through the “*Turnitin*” software, and is approved by the supervisor, the pdf file will be uploaded by the student on a pre-designated portal, and will be authenticated by the concerned supervisor. The Library will assign a unique *url* to the thesis, which would be available for downloading 6 months after submission.

Special requests regarding extension (not more than 1 year) for thesis downloading may be placed to the DoAA.

2.16.1 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 5.20.4)
- v. Certificate of the Supervisor with his signature. (For template please refer to 5.20.5)
- vi. Acknowledgment (not more than two pages)
- vii. Dedication (optional)
- viii. Abstract
- ix. Chapters, starting with ‘Introduction’ and ending with ‘Conclusion’
- x. References
- xi. The student may prepare bound thesis for his/her own record and for the supervisor(s). It is recommended that the backbone of the thesis should contain the student’s name, the title of the thesis, and the year – which should be visible when placed in a rack. The bound volume does not have to be submitted to the Academic Cell.

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