

**BYE LAWS FOR SEMESTER COURSE CREDIT SYSTEM AND EXAMINATION FOR M. Sc.
PROGRAMME**

-modified on 20.12.2011

1. Programme: Master of Science (M. Sc.)

M.Sc. in the following subjects:

- i) Biochemistry
- ii) Bioelectronics and Instrumentation (Will have separate foundation course)
- iii) Biotechnology
- iv) Botany
- v) Chemistry
- vi) Toxicology

Each programme shall be denoted by three digit code as follows:

| | |
|---------------------------------------|-----|
| a) Biochemistry | 507 |
| b) Bioelectronics and Instrumentation | 508 |
| c) Biotechnology | 509 |
| d) Botany | 510 |
| e) Chemistry | 511 |
| f) Toxicology | 512 |

Each course of programme shall be given a course number which shall be preceded by three letters abbreviation as follows:

| | |
|---------------------------------------|-----|
| a) Biochemistry | MBC |
| b) Bioelectronics and Instrumentation | MBI |
| c) Biotechnology | MBT |
| d) Botany | MBO |
| e) Chemistry | MCH |
| f) Toxicology | MTX |

These all are full time regular courses.

FOUNDATION COURSE (MFC – 001):

Foundation Course was introduced in the Faculty of Science in the year 2009. This is compulsory for all the M.Sc. students except those enrolled in Bioelectronics and Instrumentation (MBI), who will have a separate Foundation Course specifically developed for them.

During an academic year, a candidate who is enrolled in the M.Sc. Programme, shall not be allowed to enroll for any other full-time programme of study and shall not appear in any other examination of a full time course of this or any other university.

2. Duration: Two Years of Four semesters (two each year) designated as under:

- 1st Semester - July to December of 1st year
- 2nd Semester - January to May of 1st year
- 3rd Semester - July to December of 2nd year
- 4th Semester - January to May of 2nd year

Teaching days in each semester shall normally be **90 days**.

Medium of instruction and examinations: **English**

3. Eligibility of Admission: All candidates seeking admission to any of the above M.Sc. programmes must appear in the Entrance Test conducted by Jamia Hamdard. Also, the candidates should fulfill the following qualifications for admission to:

M.Sc. Biochemistry: Must have passed B. Sc. from a recognized university under 10+2+3 system with Biochemistry or Chemistry as one of the subjects and secured at least 55% marks in the aggregate.

M.Sc. Bioelectronics and Instrumentation: Must have passed B.Sc. in Instrumentation/ Physics/ Electronics/ Biochemistry/ Biotechnology or allied disciplines such as B. Pharm. with at least 55% marks in aggregate.

M.Sc. Biotechnology: Must have passed B. Sc. from a recognized university under 10+2+3 system with Biological Sciences and secured at least 55% marks in the aggregate. The candidates having passed B.Sc. (Agriculture) or B.V. Sc. are also eligible.

M.Sc. Botany : Must have passed B. Sc. from a recognized university under 10+2+3 system with Botany/Plant Sciences as one of the subjects and secured at least 55% marks in the aggregate.

M.Sc. Chemistry : Must have passed B. Sc. or equivalent examination from a recognized university under 10+2+3 system with Chemistry as one of the subjects and secured at least 55% marks in the aggregate.

M.Sc. Toxicology: Must have passed B. Sc. from a university recognized by Jamia Hamdard under 10+2+3 system with any three of the following subjects: Botany, Zoology, Chemistry, Biochemistry, Biotechnology, Microbiology, Environmental Biology or a subject of Life Sciences and secured at least 55% marks in the aggregate. Candidates who have studied biology at 10+2 level and have B. Pharm./B.V.Sc./B.Sc.(Ag.) degree are also eligible to apply. The minimum required percentage will be 55% in aggregate.

4. Course Structure:

- a) Foundation course shall be of 10 credits (200 marks) and 100 hours duration. The internal assessment (Sessional Tests) shall be of 50 marks, while the final examination shall be of 150 marks. There shall be three Sessional tests, 10 marks each. 10 marks will be allocated to attendance and 10 marks to assignment. The Foundation Course shall be divided into Essential and Desirable Sections and 60% questions shall be asked from the Essential Section, while 40% questions from the Desirable Section in the internal assessment and semester examinations. Each unit, on an average, would be allocated 2 marks each in each sessional.

- b) There shall be not less than two theory courses and one lab course in each semester. The detailed contents of the courses of studies shall be prescribed by respective Board of Studies and shall be reviewed regularly.
- c) There shall be not less than twenty credits or more than 25 credits of courses in each semester, except in 1st semester where Foundation course is of 10 credits, and therefore, the total number of credits may exceed accordingly. Each theory course should not be less than 3 credits or more than 4 credits. Each laboratory course shall not exceed 10 credits. Similarly, there could be seminars, assignments and projects. In such cases credits to theory and practical papers are to be adjusted accordingly.
- d) A project may be prescribed in the course structure in the 4th semester as per the requirement of specific programme. The project work may involve experimental work and literature survey on a specified topic.
- e) For project work the topics shall be given in advance, however, the credits assigned for the project work shall be awarded at the end of 4th semester. For project work, the Head of the Department shall call a meeting of all the teachers of the Department and assign appropriate number of students to each teacher to act as the supervisor for project work. The student in consultation with the supervisor shall select a topic for the project work and inform the Head of the Department.
- f) The contents of each theory course shall be divided into four units. Each unit shall preferably have equal teaching hours.
- g) At the end of 2nd and /or 4th semester(s), a department may arrange, if possible, summer training of students for 6-12 weeks in an industry/research organization/university. The Head of the Department in consultation with Industry/research organization/university shall appoint respective supervisors and co-supervisors for each student.
- h) Certain specialized courses such as M.Sc. in Bioelectronics and Instrumentation shall be exempted from Foundation Course as a specialized Foundation Course specifically developed for them and will be taught to students admitted in such courses. These courses, however, shall be governed by all other M.Sc. Bye-laws.
- i) The Botanical tour/educational tour shall be organized in the vacations. The final year students shall participate as per University rules and regulations.

5. Weightage:

Each course comprising M.Sc. programme will be allotted credits as per the following criteria:

- a) **Lectures/tutorials (L/T):** A course that is allotted one lecture/tutorial hour per week per semester shall be assigned one credit, and so on.

- b) **Practicals/Project (P)**: Two lab hours per week per semester for lab course shall be assigned one credit.

6. Attendance

- a) All Students must attend every lecture and practical class. However, to account for unforeseen contingencies, the attendance requirement for appearing in the semester examinations shall be a minimum of 75% of the classes prescribed for each course.
- b) In order to maintain the attendance record of a particular course, a roll call will be taken by the teacher in every scheduled lecture and practical class. For the purpose of attendance, each practical class will count as one attendance unit, irrespective of the number of contact hours. Attendance on account of participation in the prescribed and notified activities such as NCC, NSS, Inter University sports, educational tours/field work, shall be granted provided the participation of the student is duly verified by the officer-in-charge and is sent to the Head of the Department within two weeks of the function/activity, etc.
- c) The teacher shall consolidate the attendance record for the lectures and practicals at the end of each month and submit to the Head of the Department. At the end of the semester, the teacher shall consolidate the attendance record for the whole semester and submit it to the Head of the Department. The statement of attendance of students shall be displayed by the Head of the Department on the Notice Board. A copy of the same shall be preserved as record. Attendance record displayed on the Notice Board shall deem to be a proper Notification for the students and no individual notice shall be sent to any student.
- d) If a student is found to be continuously absent from the classes without any information for a period of 30 days, the concerned teacher shall report the matter to the Head of the Department who will report the matter to the Registrar for appropriate action that will include striking off the name of such student(s) from the rolls. Such a student may, however, apply for re-admission within 7 days from the date of issue of the notice of striking off the name of such student(s) from the rolls. The request for re-admission may be considered by the Dean of the Faculty. Such a student shall not be eligible for re-admission after the prescribed period of 7 days. The re-admission shall be effected only after the payment of prescribed re-admission fee.
- e) A student with less than 75% attendance in a course in a semester shall be detained from appearing in the semester examination of that course. The Dean of the Faculty may consider application for condoning up to 5% of attendance on account of sickness, provided the medical certificate submitted by the students should be either from the HAHC Centenary/Majeedia Hospital or Medical Practitioner registered with MCI/other similar statutory bodies of Government of India. The Medical Certificate along with Fitness Certificate should be submitted to the Head of the Department within one week after rejoining the Department and Head of the Department should then send the Certificates

immediately to the Office of the Dean after scrutinizing their genuineness along with all related documents. In extra-ordinary conditions, however, only Vice-Chancellor shall condone the attendance beyond 5% condoned by the Dean.

- f) A student detained on account of shortage of attendance in any semester shall be re-admitted to the same class in the subsequent academic year on payment of prescribed fees applicable in that year to complete the attendance requirement of that course.

7. Internal Assessment:

The Internal Assessment marks will constitute 25% of the total marks allotted to a course. For awarding Internal Assessment marks, there shall be three Sessional tests of 5 marks each for each course in a semester. First sessional test will be held in the beginning of the session, 2nd after two months of the session, and the 3rd sessional test 15 days before the commencement of the final semester examination. 5 marks will be allotted for assignment, while 5 marks will be allotted to the attendance in the respective courses in the following manner:

| | |
|--|----------|
| 100% attendance | 05 Marks |
| 75 - 99.9% attendance | 04 Marks |
| 60 – 74.9% attendance | 03 Marks |
| below 60% attendance but not less than 50% | 02 Marks |

For the evaluation of lab work, laboratory notebook, practical test/viva voce shall be taken into account. The marks shall be awarded by the respective teachers conducting the practical course.

For Foundation course, there shall be three Sessional tests, 10 marks each. In each sessional, 60% questions shall be asked from the Essential Section, while 40% questions from the Desirable Section. Each unit, shall be allocated 2 marks each in each sessional. These sessional tests will be taken in the manner as described for internal assessment of other courses. 10 marks will be allotted for assignment, while 10 marks for the attendance in the following manner:

| | |
|--|----------|
| 100% attendance | 10 Marks |
| 75 - 99.9% attendance | 08 Marks |
| 60 – 74.9% attendance | 06 Marks |
| below 60% attendance but not less than 50% | 04 Marks |

For Foundation Course, the questions for sessional exam should be sent by the teachers, who are involved in teaching Foundation Course to the Dean, Faculty of Science through respective Head of the Departments one week prior to the commencement of the test.

8. Semester Examination:

- a) Semester examination shall be held at the end of each semester as per schedule given in

the Academic Calendar of the Faculty.

- b) Up to maximum of seven days preparatory holidays may be given to the examinees before the start of the semester examinations.
- c) Each theory/practical/project/summer training having 3 to 5 credits shall be of 100 marks out of which 75% marks shall be for semester examination and 25% marks for internal assessment. Any theory/practical/project/summer training having more than 3 to 5 credits shall be given weightage accordingly. Foundation course having 10 credits shall be of 200 marks; out of which 75% marks shall be for semester examination and 25% marks for internal assessment.
- d) The question paper for semester examinations shall be set either by the external examiner or an internal examiner. The Board of Studies of a department shall draw a panel of name of examiners, both internal and external, for approval by the Vice chancellor. If the external examiner is unable to send the question paper by the deadline set by the examination branch of the University, the Head of the Department after consultation with the examination branch shall get the paper set internally by a faculty. The papers set by the examiners can be moderated in consultation with the teacher who taught that course. Teachers appointed on contractual basis with appointment of less than one academic session, and temporary as well as ad-hoc teachers may not ordinarily be appointed as examiners. All such teachers, however, will be expected to assist in the practical examination.
- e) The question paper shall have five questions. There shall be one question from each of the 4 units of the course and one question shall contain objective type/short answer questions covering all the units of the course. The candidate shall have to answer all the five questions. There shall, however, be internal choice within a unit. The choice shall be given by setting alternative questions from the same unit. The question paper should be such that it covers all the topics of that course. For Foundation Course, the questions from different units shall be set by respective Head of the Departments. The question paper shall have questions of 75% marks from desirable sections of each unit, while questions of 25% mark from optional sections.
- f) The duration of the semester examination of a theory course shall be three hours. Practical exams of a lab course shall be of at least four hours duration. The practical examination shall be conducted by an external and an internal examiner and assisted by other teachers.
- g) For projects, each student shall submit three typed bound copies of his/her project work to the supervisor(s) by the end of the 4th semester. A student shall not be entitled to submit the project report unless he/she has pursued project work during 4th semester under the guidance of a duly appointed supervisor(s). The report shall embody the candidates own work and an up-to-date review of the subject area. The write-up shall detail a critical

assessment of the subject area and indicate in what respect the work appears to advance the knowledge of the subject concerned and future course of investigation required.

h) The project report shall be examined by a Board of Examiners and the student shall have to appear for viva-voce. The Board of Examiners shall consist of the following:

- An external examiner
- Head of the Department
- A senior teacher of the Department
- Supervisor(s)

The Board shall examine the project report of all the students, conduct the viva-voce and award marks for the project and viva-voce. All other teachers of the department will also be invited by the Head of the Department to be present during the examination. In case a student fails to secure the minimum pass marks, he/she may be asked to appear in the viva-voce again, or he/she may be asked to revise the project report in the light of the suggestions of the examiners and resubmit. For this, he/she will have to enroll as an ex-student in the next session. A resubmitted project report will be examined as above and viva voce shall be conducted along with other students.

9. Classification of Result:

Following grading system with 10 point scale shall be followed to represent performance of students in the examination:

| %age marks | Grade | Grade Point | Performance level |
|-------------------|--------------|--------------------|--------------------------|
| ≥ 80 | A + | 10 | Outstanding |
| 75-<80 | A | 9 | Excellent |
| 70-<75 | B + | 8 | Very good |
| 60-<70 | B | 7 | Good |
| 50-<60 | C | 6 | Average |
| 45-<50 | D | 5 | Below Average |
| 40-<45 | E | 4 | Marginal |
| <40 | F | 0 | Fail |
| Absent | I | - | Incomplete |

If a candidate does not write a paper, He/She will be awarded "I" grade.

To pass the course, the student must obtain a minimum of 'E' grade

The minimum CGPA required for the award of degree shall be 5

10. Earned Credits (EC):

The credits for the courses in which a student has obtained E (minimum passing grade for a course) or a higher grade in the semester exam shall be counted as credits earned by him/her. Any course in which a student has obtained 'F' or 'I' grade shall not be counted

towards his/her earned credits.

11. Evaluation of Performance:

- a) SGPA (Semester Grade Point Average) shall be awarded on successful completion of each semester.
- b) CGPA (Cumulative Grade Point Average), which is the Grade Point Average for all the completed semesters at any point in time shall be awarded in each semester on successful completion of the current semester as well as all of the previous semester. In 1st semester, CGPA is not applicable.

12. Calculation of SGPA and CGPA of A Student in a Semester:

$$\text{SGPA} = \frac{\Sigma (\text{Earned Credits} \times \text{Grade Point})}{\Sigma (\text{Total Course Credits in a Semester})}$$

$$\text{CGPA} = \frac{\sum_{j=1}^m (\text{Earned Credits} \times \text{grade point})}{\Sigma (\text{Total Course Credit in a Semester})}$$

Where m is the number of semesters passed.

13. Promotion:

- a) Promotion from 1st semester to 2nd semester and from 3rd semester to 4th semester shall be automatic.
- b) A student shall be promoted to the 3rd semester of the programme, if he/she has passed in each theory and practical courses separately of 1st and 2nd semesters. Provided that a student may carry over a maximum of 8-9 credits (equivalent to two-three theory papers, which may be of 3 or 4 credits each of courses uncleared) to the 3rd semester. A candidate will be given a total number of 3 attempts, inclusive of the first attempt, to clear the papers in which he/she fails. For such students, promotion to the next higher class will be considered subject to rules relating to passing the 1st and 2nd semester examinations within two academic years. Award of degree shall be subject to successfully completing all the requirements of the programme of study within four years from admission. In no case the award of degree shall be allowed to the students, who abstain from appearing in the semester examination.
- c) Candidates who are unable to appear in the examination, because of serious illness at the time of examinations, may be given another chance. The request has to be

processed through the Head of the Department and Dean to the Vice Chancellor. The Vice chancellor may look into the merit of the case and decide accordingly.

14. Classification of Successful Candidates:

The result of successful candidates, who fulfill the criteria for the award of M. Sc., shall be classified after the 4th semester, on the basis of his/her marks of all the four semesters.

Classification shall be done on the basis of following criteria:

- a) He/she will be awarded "Distinction", if his/her final marks are greater than or equal to 75% in all the semester examinations in the first attempt.
- b) He/she will be awarded "1st Division", if his/her final marks are greater than or equal to 60% in all the semester examinations in the first attempt.
- c) He/she will be awarded "2nd Division", if his/her final marks are greater than or equal to 50% but less than 60% in all the semester examinations in the first attempt.
- d) He/She will be awarded "Pass", if his/her final marks are greater than or equal to 40% but less than 50% in all the semester examinations in the first attempt.
- e) He/she will be treated as "fail", if his/her final marks are less than 40% in all the semester examinations in the first attempt.

15. Span Period:

- a) 1st and 2nd Semester Exams: Within two years from the first admission to the programme.
- b) All requirement of M. Sc. degree within a total period of four years from the date of their first admission.

16. Make-up Examinations:

Make-up examinations shall be held at the end of 3rd and 4th semesters. The maximum papers for each make-up examinations should not exceed two papers including Foundation Course.

17. Improvement:

A candidate who wishes to improve the previous performance will be allowed to do so as per the following regulation:

- a) A student shall be allowed only once to reappear in the semester examination of up to four theory courses along with regular students of that semester to improve upon the previous performance. The examination fee charged from such candidates shall be double the current examination fee.

- b) Such a student shall inform the Head of the Department in writing of his/her intention to improve the performance two months before the date of semester examination is to be held.
- c) If the student improves the performance, he/she shall be required to submit the earlier mark-sheet/degree. A new mark-sheet and degree shall be issued. The new mark-sheet/degree shall bear the year in which the student improved the grade.
- d) In case the grade obtained in improvement is lower than the one obtained earlier, the higher grade shall be retained.