CHAUDHARY RANBIR SINGH UNIVERSITY, JIND

Ordinance

Master of Science (Mathematics)

(ACCORDING TO CHOICE BASED CREDIT SYSTEM)

(*w e.f.* 2020-21)

1. **Definitions :**

1.1.1.1 **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.

1.1.1.2 **Choice Based Credit System (CBCS):** The CBCS provides choice for students to select from the prescribed courses (core, elective or minor courses).

1.1.1.3 **Course:** Usually referred to, as 'papers' is a component of a M.Sc. (Mathematics) programme. All courses need not carry the same weight. The courses should define learning objectives and learning outcomes. A course may be designed to comprise lectures/ tutorials/laboratory work/ field work/ outreach activities/ project work/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study etc. or a combination of some of these.

1.1.1.4 **Credit Based Semester System (CBSS):** Under the CBSS, the requirement for awarding a degree or diploma or certificate is prescribed in terms of number of credits to be completed by the students.

1.1.1.5 **Credit Point:** It is the product of grade point and number of credits for a course.

1.1.1.6 **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week.

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1.1.1.7 **Cumulative Grade Point Average (CGPA):** It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

1.1.1.8 **Grade Point:** It is a numerical weight allotted to each letter grade on a 10-point scale.

1.1.1.9 **Letter Grade:** It is an index of the performance of students in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P and F.

1.1.1.10 **Programme:** An educational programme leading to award of M.Sc. (Mathematics) Degree.

1.1.1.11 **Semester Grade Point Average (SGPA):** It is a measure of performance of work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.

1.1.1.12 **Semester:** Each semester will consist of 15-18 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from July to December and even semester from January to June. Final schedule will be notified by Academic Branch, Chaudhary Ranbir Singh University, Jind as approved by Competent Authority.

1.1.1.13 **Transcript or Grade Card or Certificate:** Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester.

2. **Duration:** Duration of Programme will be 2 Years (4 Semesters).

3. **Eligibility:**

B.A./B.Sc. (Hons.) in Mathematics/B.A. or B.Sc. (Pass) with Mathematics as one of the subjects with at least 50% marks in aggregate or any other examination recognized by State Universities of Haryana as equivalent thereto.

4. **Types of Courses:**

Courses in a programme may be of three kinds: Foundation, Core and Elective.

4.1 **Foundation Course**: The Foundation Courses are the courses based upon the content that leads to Knowledge enhancement. They are mandatory for all disciplines.

4.2 **Core Course**: There may be a Core Course in every semester. This is the course which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study.

4.3 **Core Elective Course:** Elective course is a course which can be chosen from Bouquets available for Elective Courses. Each Bouquet will have specialization in one of the branch as per requirement of industry/profession/academic and any other scope for employment. Student will adopt Bouquet in 1st Semester and Elective Course available in that Bouquet will be automatically adopted for forthcoming semesters.

4.4 **Open Elective Course:** The department will provide Open Elective (Interdisciplinary) courses (One in 2nd Semester and Another in 3rd semester) for the Open Elective Pool offered by the University.

4.5 The Board of Post Graduate Studies and Research, Department of Mathematics will decide the whole syllabus including Open Elective Course.

4.6 The class of the Open Elective course shall be conducted as per university time table for Open Electives.

4.7 The course code of the open elective courses (Even and Odd Semester) shall be decided by the Examination Branch.

4.8 A student shall have the liberty to opt Open Elective course from the list prepared by the University, as per the requirement of the scheme of the programme. However, the Open Elective course shall not be related to the Department of Mathematics.

4.9 The medium of instruction for examination of Open Elective Course shall be English.

4.10 Total credits for Open elective courses shall be 10 (5 each)

4.11 The credits for Dissertation / Project Report etc. shall be decided by the Board of Post Graduate Studies and Research, Department of Mathematics.

5. Examination and Assessment:

5.1 Every candidate shall be examined according to the scheme of examination and syllabi as approved by the Academic Council from time to time.

5.2 The examination shall comprise written papers, practical, dissertation/project work and/or viva-voce examinations prescribed by the Board of Post Graduate Studies and Research, Department of Mathematics. There shall be internal and external assessment examination. The relative weightage of internal assessment and semester end external examinations of each theory course shall be 20 percent and 80 percent respectively.

5.3 The break-up for internal assessment shall be as follows:

(a). Two Class Tests (One hour duration) : 75 %

Note : Three Class Tests will be conducted. Two Best will be considered for internal assessment.

(c). Attendance : 25%

Marks for Attendance will be awarded in a manner given below:

Theory Paper		**Practical Paper**	
Percentage of Attendance	Marks	Percentage of Attendance	Marks
90% and above	5	95% and above	5
85%-89%	4	90% to 94%	3
80% to 84%	2	Below 90 %	0
Below 80 %	0		

Provided that the candidate will have to appear for internal assessment during the concerned semester only.

5.4 In case of the assessment of practical component of courses, the evaluation should be undertaken by internal as well as external examiners on 20% – 80 % basis. Class Tests will be conducted in form of Execution of Programs. Record of Code of Program / Case Study will be sent by student to email id of concerned teacher and Chairperson, Department of Mathematics for record.

5.5 In case of the assessment of project reports / dissertation the evaluation should be undertaken by internal as well as external examiners.

The Internal Examiner will evaluate Project Report / Dissertation before submission and will award out of 40 Marks.

The External Examiner will evaluate Project Report / Dissertation forwarded by Controller of Examination, Chaudhary Ranbir Singh University, Jind and will award out of 80 Marks.

After the evaluation of Project Report / Dissertation, Examinee will present his work through presentation and appear in Viva Voce before the External Examiner. The Maximum Marks for Viva Voce will be 80.

5.6 The medium of examination shall be English.

5.7 The candidates shall write their answers in English. Minimum 40 % marks are essential in all courses for passing in the M.Sc. (Mathematics) (Grace Marks as per University norms). The minimum passing marks shall be the separately for external and internal assessment/examination. A candidate will have to score minimum 40% marks in external examination of each course to pass M.Sc. (Mathematics).

5.8 The internal assessment marks obtained by the candidates in each semester, duly countersigned by the Chairperson of Department of Mathematics /Principal of the College shall be forwarded to the Controller of Examination at least 15 days before the commencement of the semester-end examination. The Chairperson of the Department of Mathematics/ Principal of the College concerned shall preserve the record on the basis of which the internal assessment awards have been prepared, for inspection, if needed by the University up to six months from the date of declaration of the semester result.

5.9 The examination for first and third semester shall ordinarily be held in the month of December and for the second and fourth semester in the month of May/June or such dates as may be fixed by the Controller of Examination, Chaudhary Ranbir Singh University, Jind. Supplementary examination will be held for re-appear candidates as under:

Semester	When held
(a) First Semester	Along with third, semester in December of the next academic year.
(b) Second Semester	Along with fourth semester in May/June of next academic year.
(c) Third Semester	Along with first semester in December of the next academic year.
(d). Fourth Semester	Along with second semester in May / June of next academic year

(e) The students appearing in Fourth Semester Examination will be given chance to clear their reappear in 3rd Semester along with examination of 4th Semester, if they have cleared all the papers of 1st and 2nd Semester.

The dates fixed under this clause shall be notified by the Controller of Examinations in consultation with the Chairperson, Department of Mathematics.

The internal examination shall ordinarily be conducted by teacher concerned. However, the schedule shall be decided by the Chairperson, Department of Mathematics / Principal of College/Institute.

5.10 A candidate who has appeared and failed in one or more subjects in one semester shall be allowed to study for and appear in second semester. He/she will however be allowed to the third and fourth semester class provisionally only if he/she passed at least 50 % of the total papers in first and second semester taken together. Such candidate will be allowed to reappear for the papers of first and second semester in accordance with clause 5.9. A candidate shall be allowed to join next semester for study without taking into consideration his/her result in previous semester, if not declared.

5.11 A candidate who fails in a course is allowed to reappear only for a maximum of two attempts. The reappear is allowed only in external exams and the internal marks shall be carried forward. In case, student is not able to pass Internal Examination then he will awarded internal marks in proportion to marks secured in external examination.

5.12 The candidates who have passed the semester I/ II / III and IV of the M.Sc. (Mathematics) degree examination of this university and desires to improve their marks/class will be permitted to appear only for theory external examination within a period of three years from the date of their final appearance at M.Sc. (Mathematics) examination. Only one chance will be given to the candidate for each semester for improvement of performance.

5.13 Letter Grades and Grade Points:

5.13.1 10-point grading system with the following letter grades shall be used to grade the academic performance of a student:

Grades and Grade Points

Letter Grade	Grade Points
Outstanding (O)	10
Excellent (A+)	09
Very Good (A)	08
Good (B+)	07
Above Average (B)	06
Average (C)	05
Pass (P)	04
Fail (F)	00
Absent (AB)	00

5.13.2 Award of Grades and corresponding grade points should be based on Absolute grades as under :

Grade Conversion

Letter Grade	Grade Points	Marks
Outstanding (O)	10	>=85
Excellent (A+)	09	>=75 and <85
Very Good (A)	08	>=65 and <75
Good (B+)	07	>=55 and <65
Above Average (B)	06	>=50 and <55
Average (C)	05	>40 and <50
Pass (P)	04	40
Fail (F)	00	Less than 40
Absent (AB)	00	Absent

These grade points have been set keeping in view the UGC requirements of Grade B and B+ to be not less than 50 and 55 percent, respectively.

5.13.3 A student obtaining Grade F shall be considered failed and will be required to reappear in the examination.

5.13.4 For non credit courses 'Satisfactory' or "Unsatisfactory' shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA.

5.14 50% of courses offered in M.Sc.Mathematics, the assessment of the theoretical component towards the end of the semester should be undertaken by external examiners from outside the university conducting examination, who may be appointed by the competent authority from the panel approved by Board of Post Graduate Studies and Research, Department of Mathematics. In such courses, the question papers will be set as well as assessed by external examiners.

5.15 The grade points awarded to a student in any particular course/paper will be based on the performance of the student in the internal assessment (sessional tests, attendance and assignments/presentations etc.) and the external assessment (end semester examination) taken together. The distribution of internal marks shall be as per M.Sc. (mathematics) ordinance.

6. Computation of SGPA and CGPA:

The following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) shall be used :

6.1 The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, *i.e*

$$SGPA\ (Si) = \Sigma(Ci \times Gi) / \Sigma Ci$$

where C^i is the number of credits of the i^{th} course and G^i is the grade point scored by the student in the i^{th} course.

6.2 The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, *i.e.*

$$CGPA = \Sigma(Ci \times Si) / \Sigma Ci$$

where S^i is the SGPA of the i^{th} semester and C^i is the total number of credits in that semester.

6.3 The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

7. General Guidelines:

7.1 The Teaching Methodology of the Open elective courses shall be as per requirement of the offered Course.

7.2 The gap of one/two semesters missed by the student(s), as the case may be, will be counted towards the total duration of the M.Sc. (Mathematics) permissible under the regulations notified by UGC.

7.3 Grace marks shall be awarded in the Open Elective course as per the norms of University.

7.4 In case of student's migration from another University to CRSU, Jind, the equivalence of the Open Elective/Foundation Elective Course shall be decided by the Equivalence Committee of the University.

7.5 All academic matters related to the students other than those affecting the University rules and regulations framed from time to time may be looked into by a committee constituted by the Vice Chancellor.

7.6 Where this document is silent about any rule, the related Programme Ordinance, University Ordinance, calendar and regulations as framed from time to time shall be applicable.

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