

 SHIVAJI UNIVERISTY, KOLHAPUR-416 004. MAHARASHTRA

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 दुरध्वनी (ईपीएबीएक्स) २६०९००० (अभ्यास मंडळे विभाग– २६०९०९४)

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SU/BOS/Science & Tech./

Date:- 1 7 SEP 2019

To,

Nn 0 5 4 9

Head of the Department,	The Principle,
All (Science) Departments,	All Affiliated Science Colleges/Institutes
Shivaji University,	Shivaji University,
Kolhapur.	Kolhapur.

Subject: Regarding revised Guidelines and Regulations of M. Sc. CBCS under Faculty of Science and Technology.

Sir/Madam,

Copy to:

With reference to the subject mentioned above, I am directed to inform you that the University authorities have accepted and granted approval to the revised Guidelines and Regulations of M. Sc. under Faculty of Science and Technology.

The revised Guidelines and Regulations of M. Sc. CBCS shall be implemented from the academic year 2019-20 (i.e. from June, 2019) onwards. A soft copy containing revised Guidelines and Regulations is enclosed herewith, and also made available on university website www.unishivaji.ac.in. (Online syllabus)

You are therefore requested to bring this to the notice of all Students and Teachers concerned.

Thankin you,

Yours faithfully,

Quele

Dy Registrar

1)	I/c Dean, Faculty of Science and Technology	7)	B. Sc./ M. Sc. Exam Section
2)	Director, Board of Examinations & Evaluation	8)	IT Cell
3)	Chairman, All BOS and Ad-hoc board	9)	P.G.Admission
4)	Appointment Section	10)	P.G.Seminar.
5)	Affilation Section T-1/T-2	11)	Director, Centre for Distance Education
6)	Eligibility Section		



Shivaji University, Kolhapur

Choice Based Credit System (CBCS) Master of Science (M. Sc.) Program

Under Faculty of Science & Technology (To be implemented from Academic Year 2019-20)

1

Shivaji University, Kolhapur Choice Based Credit System (CBCS) Master of Science (M. Sc.) Program Under the Faculty of Science & Technology Regulations and Guidelines

(To be implemented from Academic Year 2019-20)

- **1. Implementation of Regulations & Guidelines:** The Regulations & guidelines shall be implemented gradually as mentioned below
 - a) M.Sc. Part I from Academic year 2019-20
 - b) M.Sc. Part II from Academic year 2020- 21
- 2. Eligibility Criteria: As per Regulations
- **3. Duration and Pattern of programme:** The total duration of M. Sc. Programme shall be of 2 years. The pattern of CBCS shall be of semester type. There shall be 4 semesters each of 6 months duration.
- **4. Weightage**: There shall be 2400 marks for 2 years M. Sc. CBCS Program with 96 Credits. Additional Credits of mandatory Non- CGPA courses shall be shown separately on Marks Sheet.
- 5. a) For M. Sc. Part I (Sem I & II) total credits shall be 48 with 24 credits for each semester
 - b) For M. Sc. Part II (Sem III & IV) total credits shall be 48 with 24 credits for each semester
 - c) The details of the courses are given in Table No. 1 to 4.

6. Scheme of Examination :

A) Theory Examination (Except Mathematics) :

- i) There shall be 100 marks for each course (paper). For each course 80:20 pattern shall be applicable, wherein 80 marks shall be for University assessment (UA) and 20 marks for internal assessment (IA).
- ii) There shall be separate passing for theory as well as internal examinations. Minimum 32 marks out of 80 required for passing UA and minimum 8 marks out of 20 required for passing IA.
- iii) The total marks for each semester examination is shall be 600.

B) Theory Examination for M. Sc. Mathematics:

- i) There shall be 120 Marks for each course (paper). For each course 90:30 pattern shall be applicable, wherein 90 marks shall be for University assessment (UA) and 30 marks for internal assessment (IA).
- ii) There shall be separate passing for theory as well as internal examinations. Minimum 36 marks out of 90 required for passing UA and minimum 12 marks out of 30 required for passing IA.
- iii) The total marks for each semester examination is shall be 600.

C) Internal Examination:

Scheme of internal assessment :

- i) As per UGC guidelines there shall be continuous internal assessment for M.Sc. Programme. Internal Examination will be compulsory for all students. If a student fails/remains absent in internal Examination then he / she will have to clear the internal Examination in subsequent attempt/s.
- ii) The internal examination of 20 Marks (and 30 Marks for Mathematics) shall be conducted at the mid of the each semester. The nature of questions shall be MCQ / true / false /one sentence answer type question/ short answer type questions.

D) Practical Examination:

- i) The core course practical (CCPR) examination shall be conducted annually semester wise with individual heads of passing with minimum 40% marks.
- ii) The rules for practical examinations shall be as per respective BOS guidelines.

7. Credit Distribution for M.Sc. CBCS program Table:1 M. Sc. Courses (except Mathematics, Statistics, Applied Statistics and Informatics and Nanoscience and Technology)

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	Course Name	Total	Total Credits	Percentage in
		Courses		total Course
CGPA	CC-Core Course	10	40	50
	CCS-Core Course Specialization	04	16	20
	DSE-Discipline Specific Elective	02	08	10
	CCPR-Core Course Practical	04	32	20
	Total	20	96	100
Mandatory Non-CGPA	AEC-Mandatory Non-CGPA compulsory Ability Enhancement Course (Communicative English Paper - I and II) SEC- Mandatory Non-CGPA compulsory Skill Enhancement Course (Fundamentals of Information Technology Paper-I & II)	02	04	33.33
	GE-Generic Elective	01	02	16.66
	EC (SWM MOOC) - Non-CGPA	01	* Credits as	16.66
	Elective Course		specified on SWM MOOC	
	Total	06	10+(*)	100

Table:2M. Sc. (Mathematics)

	Course Name	Total	Total	Percentage in
		Courses	Credits	total Course
CGPA	CC-Core Course	12	60	60
	CCS-Core Course Specialization	06	30	30
	DSE-Discipline Specific Elective	02	10	10
	Total	20	100	100
Mandatory Non-CGPA	AEC-Mandatory Non-CGPA compulsory Ability Enhancement Course (Communicative English Paper - I and II) SEC- Mandatory Non-CGPA compulsory Skill Enhancement Course (Fundamentals of	02	04 04	33.33
	Information Technology Paper-I & II)	01	02	16.66
	GE-Generic Elective	01	02	16.66
	EC (SWM MOOC) - Non-CGPA Elective Course	01	* Credits as specified on SWM MOOC	16.66
	Total	06	10+(*)	100

	Course Name	Total	Total Credits	Percentage in
		Courses		total Course
CGPA	CC-Core Course	12	48	50
	CCS-Core Course Specialization	06	24	25
	DSE-Discipline Specific Elective	02	08	8.33
	CCPR-Core Course Practical	04	16	16.66
	Total	24	96	100
Mandatory Non-CGPA	AEC-MandatoryNon-CGPAcompulsoryAbilityEnhancementCourse(CommunicativeEnglishPaper - I and II)III)SEC-MandatoryNon-CGPAcompulsorySkillEnhancementCourse(Fundamentals ofInformationTechnologyPaper-I& II)IIII	02	04	33.33
	GE-Generic Elective	01	02	16.66
	EC (SWM MOOC) - Non-CGPA Elective Course	01	* Credits as specified on SWM MOOC	16.66
	Total	06	10+(*)	100

Table:3 M. Sc. courses (Statistics, Applied Statistics and Informatics)

Table:4 M. Sc. Courses (Nanoscience and Technology)

	Course Name	Total	Total Credits	Percentage in
		Courses		total Course
CGPA	CC-Core Course	10	40	50
	CCS-Core Course Specialization	04	16	20
	DSE-Discipline Specific Elective	02	08	10
	CCPR-Core Course Practical	04	32	20
	Total	20	96	100
Mandatory Non-CGPA	AEC-MandatoryNon-CGPAcompulsoryAbilityEnhancementCourse(CommunicativeEnglishPaper - I and II)SEC-MandatoryNon-CGPAcompulsorySkillEnhancementCourse(Fundamentals ofInformationTechnologyPaper-I& II)	02	04	33.33
	GE-Generic Elective	01	02	16.66
	EC (SWM MOOC) - Non-CGPA Elective Course	01	* Credits as specified on SWM MOOC	16.66
	Total	06	10+(*)	100

8. Standard of passing-

- i) The standard of passing shall be 40% where the student shall have to score 32 marks out of 80 and 8 Marks out of 20 in each paper for all science subjects except Mathematics and the student shall have to score 36 marks out of 90 and 12 Marks out of 30 in respect of Mathematics. There shall be a separate head of passing for Theory, Practical and Internal Examination.
- ii) ATKT rules shall be followed in respect of Theory and Practical only.

9. Gradation Chart :

Marks Obtained	Numerical Grade (Grade Point)	CGPA	Letter Grade
Absent	0 (zero)	_	—
0-39	0 (zero)	0.0 - 4.99	F (Fail)
40-49	5	5.00 - 5.49	С
50-54	6	5.50 - 6.49	В
55-64	7	6.50 - 7.49	B+
65 - 74	8	7.50 - 8.49	А
75-84	9	8.50 - 9.49	A+
85 - 100	10	9.50 - 10.0	O (Outstanding)

Note:

- i) Marks obtained > = 0.5 shall be rounded off to next higher digit.
- ii) The SGPA & CGPA shall be rounded off to 2 decimal points.
- iii) Marks obtained in 50 marks or 200 marks paper shall be converted to 100 marks.

Calculation of SGPA & CGPA

1. Semester Grade Point Average (SGPA)

$$SGPA = \frac{\sum (Course credits \times Grade points obtained) of a semester}{\sum (Course credits) of respective semester}$$

2. Cumulative Grade Point Average (CGPA)

$$CGPA = \frac{\sum (\text{Total credits of a semester} \times \text{SGPA of respective semester}) \text{ of all semesters}}{\sum (\text{Total course credits}) \text{ of all semesters}}$$

10. Result - The result of each semester shall be declared as Pass or Fail. However, ATKT rules will be followed for theory and practical passing.

11. For Geography, Home Science and I.D.S. subject under the Faculty of Humanities, M.A. rules shall be applicable.

12. Equivalence of papers and chances for the students in previous – semester pattern – Two additional chances in subsequent semesters shall be provided for the repeater students of M.Sc. After this the concerned students will have to appear for the examination as the case may be Equivalence of papers in respective scheme.

13. Revised Rules - These revised Guidelines and Regulations will be gradually implemented with effect from the academic year 2019-20 for M.Sc. Part I, 2020-21 for M. Sc. Part II.

M.Sc. CBCS Program Guidelines and Regulations of Under the Faculty of Science & Technology

(To be implemented from the Academic Year 2019-20)

CBCS	Eligibility criteria
R. M. Sc. 1	A)
	 i) Any person who has taken the degree of B. Sc./ B. A. this University or the Degree of any other statutory University recognized as equivalent with 55% Marks (or an equivalent grade in a point scale wherever grading system is followed).
	ii) Candidate has to keep four semesters in the University as a post-graduate student is admitted to the examination for the degree of Master of Science in any of these subjects mentioned in R. M. Sc. No. 4.
	 iii) A student shall be held eligible for admission to the M. Sc. Programme provided candidate B. Sc./ B. A. examination either with a principle subject or with a subsidiary/ interdisciplinary/ applied/ allied subjects and has passed entrance examination conducted by the University.
	 iv) The students with B. Sc./ B. A. (General Course) from other universities shall be eligible if they qualify through entrance examination and they score minimum 55% in the subject at the B. Sc. Examination.
	 v) While preparing the merit list for M. Sc. Admission, the performance at B.Sc./ B.A. as the case may be and the performance at the entrance examination will be given equal weightage (50:50).
	All the candidates eligible as mentioned with above eligibility criterion have to pass entrance examination conducted by Shivaji University.
	a) M. Sc. (Environmental Science) :
	B.Sc. with Physics / Chemistry / Botany / Zoology / Statistics / Mathematics /
	Pollution / Environmental Science /Bio-chemistry./Geography (B.Sc. / B. A.) / Microbiology / Electronics/Computer Science Agriculture / Bio-Technology /
	Nano Science and Technology as the Principal / Subsidiary course (Subject).
	b) M. Sc. (Applied Chemistry / Industrial Chemistry) :
	B. Sc. with Chemistry as a principal subject of study at B.Sc. Course.
	c) M. Sc. (Agro chemicals and Pest Management) :
	B.Sc. with Chemical Engineering graduates with Plant Protection/ Chemistry/ Botany/ Agriculture/ Bio Chemistry/ Zoology/ Microbiology and any two of the
	Botany/ Agriculture/ Bio-Chemistry/ Zoology/ Microbiology and any two of the following as Subsidiary Course (Subject) such as Chemistry/ Botany/ Bio-

	chemistry/ Agriculture/ Zoology/ Microbiology/Horticulture / Plant-Protection
	as a principal / Subsidiary course (subject) of study at B.Sc. Course.
	d) M.Sc. Biochemistry / Biotechnology / Microbiology / Environmental
	Biotechnology/ Pharmaceutical Microbiology:
	B. Sc. with Biotechnology/ Chemistry/ Biochemistry/ Microbiology/
	Botany/Zoology/B. Pharm. / MBBS/ B.E. / B.Sc. Agriculture/ life sciences as
	principal Course (subject).
	e) M. Sc. (Computer Science)
	B. Sc. with Computer Science/ B. Sc. Computer Science (Entire) / BCS/ B.Sc.
	(Mathematics/ Statistics/ Electronics) as principal Course (subject).
	f) M. Sc. (Food Science and Technology) :
	B. Sc. with Food Science and technology, Food Science and Quality control,
	Food Technology and Management, Agriculture, Horticulture and Home
	Science, Microbiology, Bio-Technology, Chemistry and Zoology as principal
	Course (subject).
CBCS	1.1 There shall be semester wise University Theory Examination.
R. M. Sc. 2	1.2 Practical Exam is annual.
	1.3 Candidates registering for M.Sc. (Mathematics) CBCS program through
	distance mode shall be exempted from regular attendance and keeping of the terms
	of the University.
	1.4 The course of studies, and the standard of passing etc. at the M. Sc.
	(Mathematics) program through distance mode will be identical with those at the
	regular M.Sc.(Mathematics) program.
CBCS	The M.Sc. CBCS degree will be awarded only after successful completion of the
R. M. Sc. 3	prescribed internal, theory and practical examinations conducted by University.
IX. 111. DC. D	presenteed internal, theory and practical examinations conducted by entrensity.
CBCS	The M. Sc. CBCS program shall be in the following subjects.
R. M. Sc. 4	1. Mathematics
K. WI. SC. 4	2. Chemistry
	3. Physics
	4. Botany
	5. Zoology
	6. Geography
	7. Geology
	8. Statistics
	9. Applied statistics and Informatics
	10. Microbiology
	11. Biochemistry
	12. Electronics
	13. Environmental Science
	14. Industrial Chemistry 15. Agrochemicals and Pest Management
	15. Agrochemicals and Pest Management

	16. Sericulture
	17. Applied Chemistry
	18. Industrial Microbiology
	19. Environmental Bio-Technology
	20. Bio - Technology
	21. Computer Science
	22. Food Science and Technology
	23. Home Science
	24. Nanoscience and Technology
	25. Other Science related Subjects
	26. Pharmaceutical Microbiology
CBCS	4.1 (a) The M.Sc. CBCS program shall consist of four semesters where each
R. M. Sc. 5	semester shall have 600 marks. The entire M.Sc. CBCS program shall be of 2400
	marks.
	(b) Each semester of M.Sc. CBCS program (except Mathematics, Statistics, Applied
	Statistics and Informatics and Nanoscience and Technology) shall have four theory
	papers each of 100 marks and practical of 200 marks.
	(c) Each semester of M. Sc. (Statistics, Applied Statistics and Informatics) shall have
	five theory papers each of 100 marks and practical of 100 marks.
	(d) Each semester of M. ScI (Nanoscience and Technology) and B.ScM. ScIV
	(Nanoscience and Technology) shall have five theory papers each of 100 marks and
	practical of 200 marks, and each semester of M. ScII (Nanoscience and Technology)
	and B.ScM. ScV (Nanoscience and Technology) shall have research project and
	dissertation of 200 marks and seminar based on project of 100 marks.
	(e) Each semester of regular M.Sc. (Mathematics) CBCS program shall have five
	theory papers each of 120 marks.
	4.2 The examination for the M. Sc. CBCS program shall be of four Semesters (i.e.
	Semester-II, Semester-III & Semester-IV)
	4.3 The commencement and conclusion of each semester shall be notified by the
	University from time to time.
	4.4 (a) There shall be a University examination for theory at the end of each
	Semester.
	(b) There shall be a annual University practical examination based on practical of
	each semester separately with separate passing of heads.
	(c) The evaluation of theory & Practical examination shall be done by internal as
	well as external examiners.
	4.5 Each Theory Paper shall be of three hours duration. The duration of practical
	examination shall be as per BOS guidelines of the respective subject. The
	Semester theory examination shall be conducted as under :
	October/November: Semester I to IV
	April/May: Semester I to IV

CBCS	 4.6 A student who has passed semester examination shall not be allowed to take the examination in the same semester again. 4.7 The student is allowed to keep term in the third semester even if he/she fails in three heads of University Examination of Part - I (Sem-I & II) taken together. 4.8 The result shall be declared at the end of each semester examination as per University Rules.
R. M. Sc. 6	A candidate who has successfully completed (passed) M.Sc. CBCS program in one subject may be allowed to reappear in another subject specified in O. M.ScI, provided that he/she keeps four additional terms by paying additional fee required.
CBCS R. M. Sc. 7	 Change in Special Paper: A candidate who has successfully completed (passed) M.Sc. CBCS program in one subject and if he/she wish to appear in additional courses (papers) or optional group of special courses (papers) of the same subject, then he /she may be allowed by paying additional fee required and keeping additional terms of new papers. The candidate passing in this manner shall be awarded only a certificate to that effect and shall be considered competent in the respective specializations.
CBCS R. M. Sc. 8	Two more chances following the regular batch examination of the old course shall be given to the students.
CBCS R. M. Sc. 9	 Class Improvement A candidate who has completed M.Sc. CBCS program with pass class or second class and wish to improve his/her class (result) in the same subject then such candidate shall be allowed to do so as per the following provisions. 8.1 The provision to reappear will be available only to the holders of the Master's Degree of this University. 8.2 To improve the class (result), a candidate may be given three chances, within a period of six years from his/ her passing the said examination, after which, no opportunity for class improvement or equivalence be granted. During the span of six years, if the syllabus is changed, the candidate shall have to appear for the equivalent courses (papers) prescribed by the concerned BOS. 8.3 The students who wish to apply for class improvement can take maximum 4 courses (papers) mentioned in their final year semesters mark sheet (i.e. the papers of Semester III and IV). Students can give only the papers in their selected subjects, and papers once chosen cannot, under any circumstances, be changed. 8.4 If a student appears for the examination and fails, or obtain less than the required marks, then the candidate looses one chance. 8.5 A candidate intending to re-appear at M. Sc. CBCS examination under these rules

shall be allowed to do so without keeping fresh terms.

- 8.6 Marks obtained by students for term work, practicals, self-study exams and all other internal assessment marks obtained previously shall remain unchanged. No change in the above mentioned marks is permissible
- 8.7 a) A candidate intending to re-appear for the M.Sc. CBCS program of this University under these rules shall be governed by the rules and regulations relating to the course and syllabi which may be prescribed by the University from time to time. It is entirely the responsibility of the candidate to ascertain that the courses (papers) chosen are a part of a syllabus in force and are actually taught for the said examination.
 - b) A candidate is required to get his/her name registered as external student by submitting the prescribed registration form along with the necessary certificates and fees within the prescribed date under this scheme.
- 8.8 a) The result of the candidate appearing for the M. Sc. CBCS program under these rules will be declared only if he passes the whole examination in a class higher than the class he possesses. The marks obtained by the candidate whose class is not improved will be made known to him on request and on payment of the prescribed fees. So also, the statement of marks for his/her Semester examination will be issued on payment of prescribed fees.
- b) The answer books of the candidates appearing under this scheme

can be verified and revalued as per the University rules.

- 8.9 A candidate re-appearing for M. Sc. CBCS program under these rules and obtaining B+ class or higher class shall not be eligible to appear again for the same examination in the same course or courses for securing a class higher than the B+.
- 8.10 A candidate passing any of the Post-graduate examinations mentioned above under these rules shall not be eligible to receive any prizes, scholarships, etc. instituted by the University and he/she shall also not be entitled to a merit certificate from the University.
- 8.11 A candidate who improves his class under this scheme shall have to surrender his previous 'Degree Certificate' to the Shivaji University. If he fails to do so the degree under the 'Improvement of Class Scheme' will not be conferred on him/her.
- 8.12 If after applying for class improvement, student is credited with class improvement, then that result shall considered to be final. If class is not improved, original result, before class improvement, shall be final.
- 8.13 The scheme for marks and grade point for class improvement shall be as per prevalent syllabus and rules.
- 8.14 Results for class improvement shall be declared as per prevalent rules (O. 91,94 and 96) at that given point of time.

CBCS	Standard of Passing		
R. M. Sc. 10	The candidate securing minimum of 40% marks in each head of passing shall be		
	declared as successful candidate and the grade/class shall be as follows :-		
	The percentage of marks Class		
	i) 40-49.99% Pass Class		
	ii) 50-54.99% Second Class		
	iii) 55-59.99% B+ Second Class		
	iv) 60-69.99% First Class		
	v) 70% and above First Class with Distinction.		
CBCS	Pattern of Question Paper		
R. M. Sc. 11	a) University theory question paper of each course shall be of 80 Marks (except Mathematics) and 90 marks for Mathematics.		
	b) The duration of University theory examination shall be of three hours.		
	c) The question paper shall consist of objective type, short answer type and long		
	answer type questions. d) There shall be total seven questions of equal marks out of which Q. No. 1 is		
	compulsory		
	e) From Q. No. 2 to Q. No. 7 candidate has to attempt any four questions.f) Q. No 2 to Q. No.7 shall have sub questions.		
	g) The nature of Q. No.1 shall be of objective type : MCQs and / or fill in the blanks		
	and / or short answer type question.		
	Instructions to the Paper setters / Examiners		
	a) The question paper shall be set so as to cover the entire syllabus of the respective		
	course (paper).		
	b) Keys to the objective type question and scheme of marking for all question shall be submitted along with the question paper in a separate envelope.		
	c) The chairperson of respective examination shall be responsible to complete the		
	paper setting work as per University rules.		
	Size of the Answer books:		
	The answer book of 40 pages be supplied for post-graduate students.		
CBCS	Mandatory Non-CGPA Courses		
R. M. Sc. 12	a) There shall be mandatory Non-CGPA AEC course of 2 credits each in Semester-I and		
K. WI. SC. 12	Semester -III. There shall be internal assessment of 50 marks each of 2 hours duration, out of which minimum 20 marks are required for passing.		
	b) There shall be mandatory Non-CGPA SEC courses of 2 credits each in Semester -II		
	and Semester -IV. There shall be internal assessment of 50 marks each of 2 hours duration, out of which minimum 20 marks are required for passing.		
	duration, out of which minimum 20 marks are required for passing.		
	c) There shall be mandatory Non-CGPA GE course of 2 credits in Semester -IV. There		

shall be internal assessment of 50 marks of 2 hours duration, out of which minimum 20 marks are required for passing.

d) There shall be mandatory Non-CGPA EC course related to UGC SWAYAM-MOOCs in Semester -III. The qualified candidates shall obtain the credits as specified on UGC SWAYAM-MOOCs portal. The candidates who do not qualified UGC SWAYAM-MOOCs examination have to qualify the internal written examination of equivalent credits conducted by the respective department. The maximum marks shall be 25 per credit and minimum 40% of total marks required for passing. The nature of question paper and duration of the examination shall be decided by the respective department. The rules and regulations regarding the internal examination of non-CGPA EC shall be communicated by BOS.