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NAAC (2021)
With CGPA 3.52

SHIVAJI UNIVERSITY, KOLHAPUR - 416004,
MAHARASHTRA

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शिवाजी विद्यापीठ, कोल्हापूर - ४१६००४, महाराष्ट्र

दूरध्वनी-इंजीनियरिंग - २६०९०००, अभ्यासमंडळे विभाग दुरध्वनी ०२३१-२६०९०९४



Ref./SU/BOS/Science/532

Date : 03/10/2024

To,

The Principal
All Affiliated (Science) Colleges/ Institutions,
Shivaji University, Kolhapur

Subject :Regarding Rules and Regulation of all B.Sc. degree programme under the Faculty of Science and Technology as per National Education Policy, 2020 (NEP 2.0)

Sir/Madam,

With reference to the subject mentioned above, I am directed to inform you that the University authorities have accepted and granted approval to the Rules and Regulation of all B.Sc.Degree Programme under the Faculty of Science and Technology as per National Education Policy, 2020 (NEP 2.0)

The Rules and Regulation shall be implemented from the academic year **2024-2025** onwards. A soft copy containing is attached herewith and it is also 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.

Thanking you,

Yours faithfully,

(D. S. M. Kubal)
Dy. Registrar

Encl : As above

Copy to,

1. Dean, Faculty of Science and Technology
2. Chairman, BOS under Faculty of Science and Technology
3. Director, BOEE
4. Appointment A&B Section
5. P. G. Admission Section
6. B. Sc.-M.Sc.Section
7. Affiliation Section (T.1./T.2.)
8. Computer Center/I.T.Cell
9. Eligibility Section
10. IQAC
11. P.G. Seminer Section

} for information

} for information and necessary action.

SHIVAJI UNIVERSITY KOLHAPUR



ESTD.1962
NAAC A++Grade

Rules and Regulations

Bachelor of Science (B.Sc.)

Under the Faculty of Science and Technology

(National Education Policy,2020)

(With effect from Academic Year 2024-25)

Shivaji University, Kolhapur

Bachelor of Science (B.Sc.)

Under the Faculty of Science & Technology

(Structure, Syllabus, Rules and Regulations in accordance with National Education Policy with effect from Academic Year 2024-25)

1. Implementation of Revised guidelines and rules: The revised guidelines and rules shall be implemented gradually as mentioned below:

Level	Programme		From Academic Year
Undergraduate Programme:			
Level 4.5	Undergraduate Certificate (One year or two semesters)	B.Sc.Part-I	2024-25
Level 5.0	Undergraduate Diploma (Two years or four semesters)	B.Sc.Part-II	2025-26
Level 5.5	Bachelor's Degree (Three years or six semesters)	B.Sc.Part-III	2026-27
Level 6.0	Bachelor's Degree with Honours /Research (Four years or eight Semesters)	B.Sc.Part-IV	2027-28

(If the candidate wants to exit after a certain level, the awards after completing specific level will be: Undergraduate Certificate in Science, Undergraduate Diploma in Science, B. Sc. And B. Sc. (Honours/Research) for Level-4.5 and additional 4 credits, Level-5.0 and additional 4 credits, Level-5.5 and Level- 6.0 respectively. Other provisions for multiple entry and multiple exit as per the university's rules and regulations are applicable).

2. Eligibility Criteria:

The eligibility of students taking admission at B. Sc. Part-I [Level 4.5](initial entry) and the eligibility of students making lateral entry (Multiple entry-ME) admission at Level 5.0/ Level 5.5/ Level 6.0 are required to be scrutinized (with stipulated procedure) on the basis of following criteria:

(A) Eligibility requirements for admission to B. Sc. Part-I (Level 4.5):

- i) The students passing the Higher Secondary School Certificate Examination with Science stream or Vocational subjects with science stream conducted by the Maharashtra State Board of Higher Secondary Education shall be allowed to enter upon the B. Sc. Part-I (or Undergraduate Certificate in Science).

OR

- ii) An Examination of any other Statutory Board or an examining Body recognized as equivalent thereto.

OR

- iii) Completed 2nd year of the 3-year diploma after 10th

(B) Eligibility requirements for admission to B. Sc. Part-II (Level 5.0):

- i) The students passing or ATKT the B. Sc. Part-I (or Undergraduate Certificate in Science) shall be allowed to enter upon the B. Sc. Part-II (or Undergraduate Diploma in Science).

OR

- ii) An Examination of any other Statutory University or an examining Body recognized as equivalent there to.

OR

- iii) Completed 3-year diploma course with subjects allied / related to the subject at B.Sc. Part I

OR

- iv) Completed first year of B.E./B. Tech. with subjects allied / related to the subject at B.Sc. Part I

(C) Eligibility requirements for admission to B. Sc. Part-III (Level 5.5):

- i) The students passing (pass/ ATKT) the B. Sc. Part-II (or Undergraduate Diploma in Science) and successfully completed

level 5 shall be allowed to enter upon the B. Sc. Part-III (or Three Year Undergraduate Degree in Science).

OR

- ii) An Examination of any other Statutory University or an examining Body recognized as equivalent thereto.

OR

- iii) Completed second year of B.E./B. Tech. with subjects allied / related to the subject at B.Sc. Part II

(D) Eligibility requirements for admission to B. Sc. Part-IV (Level 6.0):

- i) The students passing the B. Sc. Part-III (or Three-Year Undergraduate Degree in Science) with 7.5 CGPA or 75% marks in Three-Year Undergraduate Degree in Science shall be allowed to enter upon the B. Sc. Part-IV (or Four-Year Undergraduate Degree in Science with Honours/ Honours with Research).

OR

- ii) An Examination of any other Statutory University or an examining Body recognized as equivalent thereto.

Eligibility Application requirement:

- (a) Students who are seeking admission for Level 4.5 need to apply for eligibility.
- (b) Students who are not taking any exit from the programme at any level and students re-entering after taking exit, need not apply for eligibility at Level 5.0, 5.5 and 6.0.
- (c) However, students from other university who wish to seek admission for any level of undergraduate degree need to apply for eligibility.

Rules for Multiple Exits:

- a) If a student wishes to exit after completion of Level 4.5, he/she has to complete additional four credit skill course/ internship.
- b) If a student wishes to exit after completion of Level 5.0, he/she has to complete additional four credit skill course/ internship.

c) If a student wishes to exit after completion of Level 5.5, he/she need not require completing any additional skill course/ internship.

3. Pattern of B.Sc. Programme: The pattern of program will be of semester type.

(A) **Weightage:** There shall be Undergraduate certificate in science program with 48 credits. There shall be Undergraduate diploma in science with 92 credits. There shall be Three Year B.Sc. Programme with 132 credits. The candidate wishes to attempt for Four-Year B.Sc.(Hon./Research) may opt for 4th year which will have additional 44 credits, hence, Four Year B.Sc. Programme will require 176 credits.(Please refer the university regulations and structure of the programme for details).

4. Credit distribution chart for B. Sc. Programme:

a) For 3 year B. Sc. Programme:

Course Name		Total Credits	% of total credits
Major			
Major Mandatory(MM)	MM	52	57.58
Major Elective(ME)	ME	08	
Vocational Skill Courses(VSC)	VSC	06	
On Job Training(OJT)	OJT	04	
Field Project(FP)	FP	02	
Indian Knowledge System	IKS	02	
Community Engagement Programme	CEP	02	
Major Total Credits		76	
Minor	MIN	24	18.18
Open Elective (OE)/ Generic Elective(GE)Courses	OE	10	7.58
Ability Enhancement Courses	AEC	08	10.60
Indian Knowledge System(Generic)	IKS	02	

Value Education Courses	VEC	04	
Skill Enhancement Courses	SEC	06	6.06
Co-Curricular Courses(NSS/NCC/Sports/Cultural Activities)	CC	02	
TOTAL		132	100%

b) For 4 year B.Sc. Programme (Honours Degree)

Course Name		Total Credits	% of total credits
Major			
Major Mandatory	MM	80	65.91
Major Elective	ME	16	
Vocational Skill Courses	VSC	06	
On Job Training	OJT	08	
Field Project	FP	02	
Research Projects*	RP	00	
Indian Knowledge System	IKS	02	
Community Engagement Programme	CEP	02	
Major Total Credits		116	
Minor			
Minor	MIN	24	15.91
Research Methodology	RM	04	
Open Elective/Generic Elective Courses	OE	10	5.68
Ability Enhancement Courses	AEC	08	7.95

Indian Knowledge System(Generic)	IKS	02	4.55
Value Education Courses	VEC	04	
Skill Enhancement Courses	SEC	06	
Co-Curricular Courses(NSS/NCC/Sports/Cultural Activities)	CC	02	
TOTAL		176	100%

c) For 4 year B. Sc. Programme (Honours with Research Degree):

Course Name		Total Credits	% of total credits
Major			65.91
Major Mandatory	MM	72	
Major Elective	ME	16	
Vocational Skill Courses	VSC	06	
On Job Training	OJT	04	
Field Project	FP	02	
Research Projects*	RP	12	
Indian Knowledge System	IKS	02	
Community Engagement Programme	CEP	02	
Major Total Credits		116	
Minor	MIN	24	

Research Methodology	RM	04	
Open Elective/Generic Elective Courses	OE/GE	10	5.68
Ability Enhancement Courses	AEC	08	7.95
Indian Knowledge System(Generic)	IKS	02	
Value Education Courses	VEC	04	
Skill Enhancement Courses	SEC	06	4.55
Co-Curricular Courses(NSS/NCC/Sports/Cultural Activities)	CC	02	
TOTAL		176	100%

*For honours degree with research, research project is applicable and for honours degree, courses related to major are incorporated.

5. Scheme of Examination: Total marks shall be 50 for 2 credit course.

1. The question paper in each semester end examination for each theory course (paper) for B.Sc. (all Semesters) shall be of 40 marks for 2 credits. Total marks for each course shall be based on continuous assessments and semester- end examination. The division of internal assessment and semester–end examination for B. Sc. will be as follows:

Particulars	2 Credit Course	Duration
1. Semester-end Examination	40 Marks	1.5 hrs
2. Internal Assessment	10 Marks	1 hrs
Total marks for each course	50 Marks	--

2. The Examination for practical course will be of 50 marks at end of each semester. The rule for practical examination shall be as per the circular/ letter issued by respective board of studies.
3. The examination pattern for Co-Curricular Activities (CC), Field Project (FP), On Job Training (OJT), Community Engagement Program (CEP) and Research Project (RP) as per the University guidelines.

Internal Assessment Process shall be as follows:

- (a) The internal assessment should be conducted after completing 50% of syllabus of the course/s.
- (b) In case a student has failed to attend internal assessment on scheduled date, it shall be deemed that the student has dropped the test. However, in case of student who could not take the test on scheduled date due to genuinereasons, such a candidate may appeal to the Programme coordinator /Principal /Head of the Department. The Programme coordinator /Principal /Head of the Department in consultation with the concerned teacher shall decide about the genuineness of the case and decide to conduct special test to such candidate on the date fixed by the concerned teacher but before commencement of the concerned semester-end examination.

The outline for continuous internal assessment activities shall be as under:

Outline for continuous internal assessment activities

Level	Semester	Activities Per Semester	Marks
4.5	Semester–I	Assignment	10 marks
	Semester–II	Unit test	10 marks
5.0	Semester–III	Unit test	10 marks
	Semester–IV	Oral examination/ Group discussion	10 marks
5.5	Semester– V	Seminar/ Group discussion/ Field Work/ Project Work	10 marks
	Semester– VI	Study tour / Field Work / Project Work / Seminar	10 marks
6.0	Semester– VII	Case Study /Field Work/ Project Work	10 marks

Semester– VIII	Case Study/ Field Work/ Project Work	10 marks
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6. **Ordinances regarding the examination:** O. B.Sc.2,3 and 4 shall prevail.

7. **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 old three-year B.Sc. program. In such case the scores obtained by the students in NEP 1.0/CBCS scheme should be converted into equivalent credits in NEP 2.0. After that the students concerned shall have to appear for the examination as per this revised pattern.

If a student fails in two consecutive chances he/she has to take admission for the respective course in NEP 2.0. In such cases his previous performance of incomplete academic years (B. Sc. I, B. Sc. II or B. Sc. III) will be cancelled.

8. **Standard of Passing:** The standard of passing shall be as per shown in the following table:

	Semester End Exam	Internal Assessment	Course Exam (Total)
Maximum Marks	40	10	50
Minimum Marks required for passing	14	4	18

1. There shall be a separate head of passing for semester end examination and internal examination.
2. Minimum 18 marks out of 50 are required for passing of practical examination of each course.
3. Passing criteria for Co-Curricular Activities (CC), Field Project (FP), On Job Training (OJT), Community Engagement Program (CEP) and Research Project (RP) as per the University guidelines.

Gradation Chart:

% of Marks Obtained	Numerical Grade (Grade Point)	CGPA	Letter Grade
Absent	--	-	-
0 – 34	0	0.0 – 4.99	F (Fail)
35 – 44	5	5.00 – 5.49	C
45 – 54	6	5.50 – 6.49	B
55 – 64	7	6.50 – 7.49	B+
65 – 74	8	7.50 – 8.49	A
75 – 84	9	8.50 – 9.49	A+
85 – 100	10	9.50 – 10.0	O (Outstanding)

Note:

1. Marks obtained ≥ 0.5 shall be rounded off to next higher natural number.
2. The SGPA & CGPA shall be rounded off to 2 decimal points.

Calculation of SGPA & CGPA:

1. Semester Grade Point Average (SGPA)

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

2. Cumulative Grade Point Average (CGPA)

CGPA

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

9. **Result** - The result of each semester shall be declared as Pass or Fail with grade/grade points. However ATKT rules will be followed as per University guidelines.
10. **Revised Rules** - These revised rules shall be gradually implemented with effect from the academic year 2024-25 for B.Sc. Degree programme. However the existing (i.e. pre-revised) rules shall remain in force for the students of old semester pattern during the transition period.

Rules for UG Science (B. Sc.) Programme:

R.B.Sc.No.1

The three-year B. Sc. programme shall consist of 6 semesters which will have 132 credits altogether. However, the candidate who wishes to attempt a Four-Year B. Sc. (Hon./Research) may opt for 4th year which will have 44 credits. Hence, the Four-Year B. Sc. programme will be of 176 credits. (Please refer to the university regulations and structure of the programme for details).

The examination shall be held at the end of each semester.

The theory examination for 2 credits will be of 40 (Semester end examination) and 10 (Internal examination) marks.

The practical examination for 2 credits will be 50 marks at the end of each semester.

R.B.Sc.No.2

Structure of B. Sc. programme is as shown in Annexure 1.

R. B. Sc. No.3**List of Courses:**

B. Sc. I	Sem I	<ul style="list-style-type: none"> • Subject I:DSCI, DSCII, and Practical I • Subject II: DSC I, DSC II, and Practical I • Subject III: DSC I, DSC II, and Practical I • OE I (Theory/ Practical) • IKS I (Introduction to IKS)
	Sem-II	<ul style="list-style-type: none"> • Subject I: DSCIII, DSCIV, and Practical II • Subject II: DSCIII, DSCIV, and Practical II • Subject III: DSCIII, DSCIV, and Practical II • OE II (Theory/ Practical) • VEC I (Democracy, Election and constitution)
B. Sc. II	Sem III	<ul style="list-style-type: none"> • Major V, VI, and Major Practical III • Minor V, VI, and Minor Practical III • OE III (Theory/ Practical) • VSC I Practical (Major Specific) • SEC I Theory/Practical • AEC I (English) • CC
	Sem IV	<ul style="list-style-type: none"> • Major VII, VIII, and Major Practical IV • Minor VII, VIII, and Minor Practical IV • OE IV (Theory/ Practical) • SEC II Theory/Practical • AEC II (English) • VEC II (Environmental Studies) • CEP
	Sem V	<ul style="list-style-type: none"> • Major IX, X, and Major Practical V, VI • Major I (Elective), Major (Elective) Practical- I • OE V (Theory/ Practical) • VSC II Practical II Major Specific • AEC III (English) • OJT

B. Sc. III	Sem VI	<ul style="list-style-type: none"> • Major XI, XII, and Major Practical VII, VIII • Major II (Elective), Major ((Elective) Practical- II • VSC III Practical Major Specific • SEC III Practical • AEC IV(English) • IKS II (Major Specific) • FP
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R. B. Sc. No. 4

(A) Skill Enhancement Course (SEC):

Skill Enhancement Course should be selected from the basket provided by University.

(B) Open Elective Course (OE): Open Elective Course should be selected from the basket provided by University. This course is to be chosen compulsorily from faculty other than that of major or Geography or Mathematics or Statistics from OE basket.

(C) Co-curricular Courses(CC): For Semester III one Co-curricular course such as Health and Wellness/ Yoga education / sports and fitness / Cultural Activities/ NSS / NCC / Fine Arts / Applied Arts / Visual Arts / Performing Arts is to be chosen compulsorily. The student should be engaged for four hours per week. The examination pattern will be decided by the respective bodies.

(D) On Job Training (OJT):

The candidate should complete the work of **On Job Training of 4 credits in Semester V**. The execution of OJT examination pattern shall be as per the OJT guidelines of the University.

On-job training (OJT)/ Internship/ Apprenticeship of 120 hours must be completed by the candidate in industry/ health sectors / research labs / public testing laboratories / diagnostic laboratories/ Chemical Industry / Pharmaceutical Industry.

(E) Field Project (FP): The guidelines and examination pattern will be decided by the respective board of studies.

R. B. Sc. No. 5

The student must earn at least 60% of the credits from his/her mother institute.

The students may earn at the most 40% of the credits in any head, except major related courses and minor courses through online mode approved by the University.

R. B. Sc. No. 6

- The fees for the admission to B. Sc. Part I, B. Sc. Part II, B. Sc. Part III and B. Sc. Part IV Programme shall be as prescribed by the University from time to time.

R. B.Sc. No. 7**Detailed Syllabus:**

The detailed syllabi for the various courses under this pattern shall be subject to such revision, modification etc. as may be made by the Academic council from time to time on the recommendations of the Board of Studies in different subjects. The textbooks and reference books for the various courses shall be those prescribed by the Academic Council from time to time on the recommendations of the respective Boards of Studies.

R. B. Sc. No. 8**The medium of instruction**

For the Three Year (Six Semesters) B.Sc./ Four Year B.Sc. Degree Programme

The medium of instruction for Major, Minor, VSEC, SEC, and AEC is English.

The medium of instruction for OE, CEP, CC, OJT, FP, VEC and IKS may be either Marathi or English.

R. B. Sc. No. 9

- i. In B. Sc. Part II, the student can choose any one subject as major subject, one subject as minor subject from the three subjects (Discipline Specific Core) studied in B.Sc. Part I.
- ii. The student will continue for B. Sc. Part III with the major subject he/ she opted in B. Sc. Part II.

R. B. Sc. No. 10 Multiple Entry and Multiple Exit (MEME) :

- If an exited student wants to reenter, he/she can reenter within three years from exit.
- One should complete his/ her degree program within a period of a maximum of seven years.

R. B. Sc. No. 11

No candidate shall be allowed to appear the B. Sc. Part-III (or Three- Year Undergraduate Degree in Science) Examination unless the candidate has satisfactorily kept two terms for the programme at a college affiliated to/ university department of this University or any other recognized university.

The principal of the college has to certify the attendance and the examination form of the candidate as per Ordinance O 31 and O 37. A candidate has to submit the University examination form as per the schedule and dates prescribed by the University for every examination to the University along with the prescribed fee through the Principal of the College.

R. B. Sc. No. 12

The Scheme of Physical Education has been made operative for B. Sc. Part-I. The students will get a maximum of 10 Marks after completing the Physical Education Tests conducted by the University authorities. The benefit of marks, obtained by the students shall be as under:

1. If a student fails in up to four courses (of two credits each) of passing of the University examination (Theory/Practical) and has passed in all the remaining heads, the marks obtained by him / her in the Physical Education Test shall be added to maximum upto four courses (of two credits each) for passing in which he has failed as the case may be.
2. A student getting the benefit of Physical Education marks should not be given advantage of any other Ordinance. The Physical Education Marks shall not be considered for the award of Class and for deciding merit.
3. If as a result of the addition of Physical Education marks a student does not pass the examination the marks obtained by him / her in Physical Education shall not be considered.
4. If a student is failing in more than four courses (of two credits each) the marks of the physical education test should not be added to any

head.

5. The marks of Physical Education obtained by the unsuccessful students at the B.Sc. Part-I semester Examination shall be carried forward for their subsequent attempt/s.
6. The marks obtained in Physical Education shall not be considered for earning exemption in a subject of head of passing, but the marks will be carried forward for availing the benefit at the subsequent attempts.
7. The marks secured by the students under the Physical Education scheme, if not used for promotion, shall be added to the total of his marks in the examination irrespective of the fact of his passing or failure in the examination. The Physical Education marks shall be shown as “Total + P. E. Marks”.
8. The Physical Education Test shall be conducted in the second semester.
9. The student can avail the benefit of marks of test of physical education only once in his three-year degree course.

R. B. Sc. No. 13

All Semester-end theory and practical examinations for B.Sc. Part I (Sem I and II), B.Sc. Part II (Sem II and IV), B.Sc. Part III (Sem V and Vi), B.Sc. Part IV (Sem VII and VIII) shall be held twice (i.e. April /May and October/November) a year.

R. B. Sc. No. 14

- a) A candidate who desires to seek a B. Sc. Degree in another Major course (DSE or ME), shall be permitted to do so. Selected major subject should be studied as Minor subject at level 5.0. Such candidate may appear at B.Sc. Part III (Semester V & VI) Examination on the submission of a new application for fresh admission and on payment of required fees. Such a candidate need not appear again for AEC and OE courses.
- b) The Candidate as above (in clause ‘a’) shall not be eligible for a second degree and a class, a prize, scholarship, medal, or any other award. The candidate will get the benefit of a new degree in a newcourse (subject) only if the candidate surrenders his first degree.

- c) A candidate seeking degree in a specific course (subject) not offered at B.Sc. Part II and III, but offered only at B.Sc. Part I, needs to reappear for B.Sc. Part II (Sem III and IV) and Part III (V and VI), including both theory and practical.

Such a candidate passing the examination shall not be eligible for class or additional degree. He shall be granted a certificate of having passed the additional subject. The candidate shall get new degree provide they surrenders his first degree.

R. B. Sc. No. 15

- a) The result of the B.Sc. Part I (semester I and II) examinations shall be declared publicly in three categories
- (i) Pass: Candidates who have passed the B.Sc. Part I (semester-I and II) examination.
 - (ii) Fail - ATKT: Candidates who are allowed to proceed to the B.Sc. Part II (semester-III).
 - (iii) Fail: Candidates who are failed to proceed to the B.Sc. Part II (semester-III).
- b) The result of the B. Sc. Part II (semester III and IV) examinations shall be declared publicly in three categories.
- (i) Pass: Candidates who have passed the B.Sc. Part II (semester-III and IV) examination in addition to the remaining courses, if any of privies examination.
 - (ii) Fail - ATKT: Candidates who are allowed to proceed to the B.Sc. Part III (semester-V).
 - (iii) Fail: Candidates who are failed to proceed to the B.Sc. Part III (semester-V).
- c) If a candidate fails or remains absent in examination of all the courses of semester-I or not applied for semester I examination (provided he/she attended semester I) shall be allowed to proceed to semester II.
- d) If a candidate fails or remains absent in examination of all the courses of semester-III or not applied for semester III examination (provided he/she attended semester III) shall be allowed to proceed to semester IV.

- e) If a candidate fails or remains absent in examination of all the courses of semester-V or not applied for semester V examination (provided he/she attended semester V) shall be allowed to proceed to semester VI.
- f) No candidate shall be allowed to proceed to semester-V unless the candidate has cleared semester-I and semester-II in all courses.
- g) No candidate shall be allowed to proceed to semester-VII unless the candidate has cleared all previous semesters from –I to VI in all courses with a minimum 7.5 CGPA (or 75 % Marks).
- h) If a candidate fails or remains absent in examination of all the courses of semester-VII or not applied for semester VII examination (provided he/she attended semester VII) shall be allowed to proceed to semester VIII.
- i) Rules of ATKT made by the University will be applicable from time to time.

R. B. Sc. No. 16

- (A) The Results of the Examination will be declared based on marks obtained, Grade points obtained, Credit points, Status, Percentage of marks, Result, SGPA and CGPA with numerical grade points, and letter grades. The list of Courses, course codes, Paper numbers of programme, numerical grade & letter grade table, and calculation of SGPA and CGPA table shall be mentioned on the backside of the mark sheet.
- (B) In the case of a Three-Year B. Sc. Degree, the result of B. Sc. programme (Semester-I to VI) shall be declared in Grades by considering SGPA and CGPA (with percentage) based on the performances of all the courses at respective semesters. The award of scholarships and prizes for the B.Sc. programme shall be determined based on the aggregate performance of the candidate at the semester-I to VI examination.
- (C) In the case of a Four-Year B. Sc. Degree, the result of B. Sc. programme (semester-I to VIII) shall be declared in grades by considering SGPA and CGPA (with percentage) based on the performances of all the courses at respective semesters. The award of scholarships and prizes for the B.Sc. programme shall be determined based on the aggregate performance of the candidate at the semester-I to VIII examination.

R. B. Sc. No. 17

Standard of Passing:

- A) To pass the three year B.Sc. degree examination, a candidate shall be required to pass in semester I, II, III, IV, V and VI examinations
- To pass each semester examination a candidate shall be required to obtain a minimum of 35% of the total marks in each course.
 - A Candidate shall have to obtain 14 marks out of 40 for the semester end theory examination, 18 out of 50 for the semester end practical examination and 4 marks out of 10 in the internal examination in each semester. If the candidate fails/ absent in the internal examination then the candidate has to pass the internal examination as per University regulations.
 - The candidate has to complete the other applicable courses like VSEC, SEC, VEC, AEC OE, IKS, CC, OJT, CEP and FP according to the criterion applicable for the respective courses.
- B) For Three year B. Sc Degree : Those of the successful candidates who obtain 45% or more of the aggregate marks in Parts-I, II & III semester Examinations, (i.e. Semester-I to VI aggregate) shall be declared to have passed the B.Sc. Degree Examinations in Second Class and those obtaining 60% or more of the aggregate marks in Parts-I, II & III Examinations (i.e. Semester-I to VI aggregate) shall be declared to have passed the B.Sc. Degree Examinations in First Class and those obtaining 70% or more of the aggregate marks in Parts-I, II & III (i.e. Semester I to VI aggregate) shall be declared to have passed the B.Sc. Degree Examination in First Class with Distinction.
- C) For Four Year B. c. with (Hon./Research) Degree: Those of the successful candidates who obtain 45% or more of the aggregate marks in Parts-I, II, III & IV Semester Examinations, (i.e. Semester-I to VIII aggregate) shall be declared to have passed the B.Sc. with (Hon./Research) Degree Examinations in Second Class and those obtaining 60% or more of the aggregate marks in Parts-I, II, III & IV Semester Examinations, (i.e. Semester-I to VIII aggregate) shall be declared to have passed the B.Sc. with (Hon./Research) Degree Examinations in First Class and those obtaining 70% or more of the aggregate marks in Parts-I, II, III & IV Semester Examinations, (i.e. Semester-I to VIII aggregate) shall be declared to have passed the B.Sc. with (Hon./Research) Degree Examination in First Class with Distinction.

R. B. Sc. No. 18

A candidate who has satisfactorily completed all courses at Semester-I of B. Sc. Part I of the Universities in the State of Maharashtra shall be allowed to join for the Semester II of the B.Sc. Part I in this university. However, a candidate who has satisfactorily kept one term in any of the Universities in the State of Maharashtra for B. Sc. Part I Semester-I examination shall not be allowed to join for the Semester II of the B.Sc. Part I in this university unless and until the candidate has to clear all the courses (papers) of Semester-I from that university

R. B. Sc. No.19

a) A candidate passing B.SC. Part-I (Sem I and Sem II) Examinations of the B.Sc. Degree programme of other Statutory Universities in State of Maharashtra can take admission to next semester of Shivaji University and the marks of earlier semesters of previous Statutory University be converted in proportion to Shivaji University, Marks structure and grades be awarded accordingly.

(b) Multiple entry and exit rules as per university Regulations and Academic Bank of Credit Regulations are applicable.

R.B. Sc. 20

Relevant amendments in the rules and regulations as per the guidelines notified by UGC / University shall be applicable.

Shivaji University, Kolhapur

Bachelor of Science

Credit Framework

SHIVAJIUNIVERSITY,KOLHAPUR									
NEP-2020: Credit Framework for UG (B. Sc.) Programme under Faculty of Science and Technology									
SEM (Level)	COURSES			OE	VSC/SEC	AEC/VEC/ IKS	OJT/FP/CEP /CC/RP	Total Credits	Degree/Cum. Cr
	Course-1	Course-2	Course-3						
SEM I (4.5)	DSC-I(2) DSC-II (2) DSC P-I(2)	DSC-I(2) DSC-II (2) DSC P-I(2)	DSC-I(2) DSC-II (2) DSC P-I(2)	OE-1(2) (T/P)		IKS-I(2)		22	UG Certificate 44
SEM II (4.5)	DSC-III(2) DSC-IV (2) DSC P-II(2)	DSC-III(2) DSC-IV (2) DSC P-II(2)	DSC-III(2) DSC-IV (2) DSC P-II(2)	OE-2(2) (T/P)		VEC-I(2) (Democracy, Election and Constitution)		22	
Credits	8(T)+4(P)=12	8(T)+4(P)=12	8(T)+4(P)=12	2+2=4 (T/P)	--	2+2=4	--	44	Exit Option:4 credits NSQF/Internship/Skill courses
	MAJOR		MINOR						
SEM III (5.0)	Major V(2) Major VI (2) Major P III (2)	--	Minor V(2) Minor VI (2) Minor P III(2)	OE-3(2) (T/P)	VSC I (2) (P) (Major specific) SEC I(2) (T/P)	AEC I(2) (English)	CC-I (2)	22	UG Diploma 88
SEM IV (5.0)	Major VII(2) Major VIII (2) Major P IV (2)	--	Minor VII(2) Minor VIII (2) Minor P IV (2)	OE-4(2) (T/P)	SEC-II(2) (T/P)	AEC-II(2) (English) VEC-II(2) (Environmental studies)	CEP-I(2)	22	
Credits	8(T)+4(P)=12		8(T)+4(P)=12	2+2=4(T/P)	4(T/P)+2(P)=6	2+4=6	2+2=4	44	Exit Option:4 credits NSQF/Internship/Skill courses

SEM V (5.5)	Major IX(2) Major X (2) Major P V (4)	Major I (ELEC)(2) Major P-I (ELEC) (2)	-	OE-5(2) (T/P)	VSC II (2) (Major specific)(P)	AEC III(2) (English)	OJT(04)	22	UG Degree 132
SEM VI (5.5)	Major XI(2) Major XII (2) Major P VI (4)	Major II (ELEC)(2) Major P-II(2) (ELEC)	-		VSC III (2) (Major specific) (P) SEC III(2) (T/P)	AEC IV(2) (English) IKS 2 (Major specific) (2)	FP-(02)	22	
Credits	8(T)+8(P) =16	4(T)+4(P)=8	-	2(T/P)	2(T/P)+4(P)=6	4+2=6	4+2=6	44	
Total Credits	40+20=60		24	10	12	16	10	132	Exit Option

SEM VII (6.0)	Major -XIII(4) Major -XIV(4) Major(P).- VII(4) Major (P) .- VIII(2)	MAJOR III (4) (ELEC)	RM-I(4)	-	-	-		22	UG Honours Degree 176
SEM VIII (6.0)	Major -XV(4) Major -XVI(4) Major (P)- IX(4) Major (P). - X(2)	MAJOR IV (4) (ELEC)	-	-	-	-	OJT(04)	22	
Credits	16(T)+12(P)=28	8(T)	4	-	-	-	04	44	
Total Credits	68+28=96		28	10	12	16	14	176	Exit Option
SEM VII (6.0)	Major -XIII (4) Major -XIV (4) Major(P).-VII (2)	MAJOR (4) (ELEC)	RM-I (4)	-	-	-	RP-4	22	UG Honours With Research

SEM VIII (6.0)	Major -XV (4) Major -XVI (4) Major (P)-VIII (2)	MAJOR (4) (ELEC)		-		-	RP-8	22	Degree 176
Credits	16(T)+4(P)=20	8(T)	4	-	-	-	12	44	
Total Credits	60+28=88		28	10	12	16	22	176	

Abbreviations:

- DSC : Department Specific Core
- DSE : Department Specific Elective
- MIN : Minor
- OE : Open Elective
- IDC : Inter-Disciplinary Course
- MDC : Multi-Disciplinary Course
- GE : Generic Elective
- OEC : Open Elective Course
- SEC : Skill Enhancement Course
- VSC : Vocational Skill Course
- AEC : Ability Enhancement Course
- VEC : Value Education Course
- OJT : On-Job Training
- FP : Field Project
- CEP : Community Engagement Programme
- CC : Co-curricular Courses
- RP : Research Project

Note:

- University may decide to offer maximum of three subjects (Courses) in the first year. The student may select one subject out of combination of three subjects (Courses), (which a student has chosen in the first year) as a **MAJOR** subject (Course) and one subject (Course) as **MINOR** Subject in the second year. Thereby it is inferred that the remaining third subject (Course) shall stand discontinued.
- **DSC:** Discipline Specific Course
- **MAJOR:** Mandatory/Elective

- **MINOR:** Course may be from different disciplines of same faculty of DSC Major
- **OE(Open Elective):** Elective courses/**Open Elective to be chosen compulsorily from faculty other than that of the Major.**
- **VSC/SEC: Vocational Skill Courses (MAJOR related)/Skill Enhancement Courses**
- **AEC/ VEC / IKS:** Ability Enhancement Courses (English, Modern Indian Language)/Value Education Courses/ Indian Knowledge System (Generic & Specific))
- **OJT/FP/RP/CEP/CC:** On-Job Training (Internship/Apprenticeship) / Field Project (Major related)/ Research Projects (Major related) Community Engagement (**Major related**)/ **Co-Curricular courses(CC)** such as Health& Wellness, Yoga Education, Sport, and Fitness, Cultural activities, NSS/NCC and Fine /applied/visual/performing Arts / Vivek Vahini etc.

Programme Structure

Structure in Accordance with National Education Policy - 2020 With Multiple Entry and Multiple Exit Options B.Sc. Part – I (Level-4.5) Semester I

Course Code	Teaching Scheme			Examination Scheme					
	Theory and Practical			University Assessment (UA)			Internal Assessment (IA)		
	Lectures + Tutorial/ (Hours/ week)	Practical (Hours/ week)	Credit	Maximum Marks	Minimum Marks	Exam. Hours	Maximum Marks	Minimum Marks	Exam. Hours
S1T1	2	0	2	40	14	1.5	10	4	1
S1T2	2	0	2	40	14	1.5	10	4	1
S1P1	0	4	2	50	17	4	--	--	--
S2T1	2	0	2	40	14	1.5	10	4	1
S2T2	2	0	2	40	14	1.5	10	4	1
S2P1	0	4	2	50	17	4	--	--	--
S3T1	2	0	2	40	14	1.5	10	4	1
S3T2	2	0	2	40	14	1.5	10	4	1
S3P1	0	4	2	50	17	4	--	--	--
OE-1 (T)/ (P)	2/ 0	0/ 4	2/ 2	40/ 50	14/ 17	1.5/ 4	10 --	4 --	1 --
IKS-1	2	0	2	40	14	1.5	10	4	1
TOTAL			22	470/480			80/70		

B.Sc. Part – I (Level-4.5) Semester II

Course Code	Teaching Scheme			Examination Scheme					
	Theory and Practical			University Assessment (UA)			Internal Assessment (IA)		
	Lectures (Hours/ week)	Practical (Hours/ week)	Credit	Maximum Marks	Minimum Marks	Exam. Hours	Maximum Marks	Minimum Marks	Exam. Hours
S1T3	2	0	2	40	14	1.5	10	4	1

S1T4	2	0	2	40	14	1.5	10	4	1
S1P2	0	4	2	50	17	4	--	--	--
S2T3	2	0	2	40	14	1.5	10	4	1
S2T4	2	0	2	40	14	1.5	10	4	1
S2P2	0	4	2	50	17	4	--	--	--
S3T3	2	0	2	40	14	1.5	10	4	1
S3T4	2	0	2	40	14	1.5	10	4	1
S3P2	0	4	2	50	17	4	--	--	--
OE-2 (T)/ (P)	2/ 0	0/ 4	2/ 2	40/ 50	14/ 17	1.5/ 4	10 --	4 --	1 --
VEC-1	2	0	2	40	14	1.5	10	4	1
TOTAL			22	470/480			80/70		
Cum. Total Sem I &II			44	940/960			160/140		

<ul style="list-style-type: none"> ● S#T#– Subject number Theory paper number ● S#P#– Subject number Practical paper number ● OE# (T) - Open Elective Theory Paper number ● OE# (P) - Open Elective Practical Paper number ● IKS-1– Indian Knowledge System Theory Paper 1 (Generic) ● VEC-1–Value Education Course (Democracy) Theory 	<ul style="list-style-type: none"> ● Total Marks for B.Sc.-I : 1100
	<ul style="list-style-type: none"> ● Total Credits for B.Sc.-I (Semester I & II) : 44
	<ul style="list-style-type: none"> ● <i>Separate passing is mandatory for University and Internal Examinations</i>
<ul style="list-style-type: none"> ● Requirement for Exit after Level 4.5: Award of UG Certificate with 44 Credits and an additional 4 credits core NSQF course/Internship. 	

Supplement to R. B. Sc 3 : list of courses

Course code	Course Title	Description
Level 4.5		
01	Animation (Entire)	Students should select three courses from this list, subject to availability of it in respective college
02	Astrophysics	
03	Biochemistry (Optional)	
04	Biotechnology (Entire)	
05	Biotechnology (Optional/Vocational)	
06	Botany	
07	Chemistry	
08	Computer Science (Entire)	
09	Computer Science	
10	Drug Chemistry	
11	Electronics	
12	Environmental Science (Entire)	
13	Fisheries	
14	Food Science & Quality Control	
15	Food Science (Entire)	
16	Food Science And Technology (Entire)	
17	Food Technology and Management (Entire)	
18	Geochemistry	
19	Geography	
20	Geology	
21	Industrial Microbiology	
22	Information Technology (Entire)	
23	Mathematics	

24	Microbiology	
25	Nanotechnology	
26	Physics	
27	Plant Protection	
28	Pollution	
29	Seed Technology	
30	Statistics	
31	Sugar Technology (Entire)	
32	Zoology	
OE -1	One course	
IKS -1	Generic	compulsory
OE -2	One course	Select from the other faculties basket chosen by the respective college
VEC-1	Democracy, Election and Constitution	compulsory

Course Codes

Note 1: Add 'rows' wherever necessary as per course requirement and kindly apply proper course codes. The 'Paper Numbers' are considered as 'Course Numbers' in New Scheme.

Note 2: See the instructions below to prepare the Course Codes in NEP

TABLE FOR STEPWISE CODE ASSIGNMENT TO PAPER

COLUMN No.	1	2	3	4	5	6	7	8
Name	PROGRAM CODE	INSTITUTE CODE	COURSE CATEGORY	NATURE OF COURSE CODE	LEVEL OF COURSE CODE	SR. NO. OF COURSE CODE	SEMESTER	COURSES
Details of coding	BS	U0325	MM/ME/RM/OJ/FP	L/P/T	9	36	G/H/I/J	1/2/3/4/...
Explanation		SUK code, Refer.	Major Mandatory (MM), Major Elective (ME), MI (Minor) Open Elective (OE), Skill Enhancement Course (SE), Indian Knowledge System (IK), Value Education Course (VE), Ability Enhancement (AE), Co-curricular Courses (CC), Community Engagement Programme (CE), On Job Training (OJ), Field Projects (FP) RP(Research Project)	Lecture (L), Practical (P), Tutorial (T)	First year level 1 Second year level 2 Third year level 3, fourth year level 4	Course Code For Electronics is 11. For other courses refer table of list of courses	SEM I: A SEM II: B SEM III: C SEM IV: D SEM V: E SEM VI: F SEM VII: G SEM VIII: H	- Course Number, also referred to as Paper Number, is only assigned for Major Mandatory (MM) and Major Elective (ME) courses. - No Course Numbers will be assigned for Research Methodology (RM), On Job Training (OJ), and Field Projects (FP).

Every code will be of 16 digits.

COLUMN 1. Program Code Assignment

- The program code for Science Bachelor Programs is designated as "BS"

COLUMN 2. Institute Code Assignment

- The Institute Code for Shivaji University is identified as "U0325"

COLUMN 3. Course Category Assignment

- As per guidelines of NEP 2020 the Course Category is assigned based on the nature of the course and is categorized into the following:

- Major Mandatory (MM),
- Major Elective (ME),
- MI (Minor)
- Open Elective (OE),
- Skill Enhancement Course (SE),
- Indian Knowledge System (IK),
- Value Education Course (VE),
- Ability Enhancement (AE),
- Co-curricular Courses (CC),
- Community Engagement Programme (CE),
- On Job Training (OJ),
- Field Projects (FP)
- RP(Research Project)

- Choose any one which is applicable for your course

COLUMN 4. Course Code Assignment

- Depending on the nature of the course, the following codes are used:

- Lecture (L)
- Practical (P)

- Choose any one which is applicable for your course

COLUMN 5. Course Code Level

- The level of the course code for first year is level 1, for second year it is level 2, for third year it is level 3 and for fourth year it is level 4.

- For further reference, please see curriculum and credit frame work for UG programme of UGC 12-12-2022

COLUMN 6. Serial Number of Course Code-

- The serial number of course code is as per the table of list of courses given above.

- Choose appropriate serial number which is applicable for your course

COLUMN 7. Semester Code Assignment

- The Semester Code is assigned as follows:

- SEM I: A

SEM II: B

SEM III: C

SEM IV: D

SEM V: E

SEM VI: F

SEM VII: G

SEM VIII: H

- Choose appropriate semester code which is applicable for your course

COLUMN 8. Course Number Assignment

- Course Number, also referred to as Paper Number, is only assigned for Major Mandatory (MM) and Major Elective (ME) courses.

- No Course Numbers will be assigned for Research Methodology (RM), On Job Training (OJ), and Field Projects (FP).

For example: first MM/ME course will have course number 1, second MM/ME course will have course number 2 likewise.

*Note: This SOP is intended to streamline and maintain consistency in the paper code assignment process for Science bachelor programs at Shivaji University.

Examples for reference:

The course code for B.Sc. Electronics Semester I course is as follows:

BS	U0325	MM	L	1	11	A	01
1	2	3	4	5	6	7	8

Nature of question paper and scheme of marking:

a) Theory (Semester exam) for each Theory paper: Maximum marks – 40

Modality of Assessment

Students appearing for the NEP BSc I will be evaluated as per the 80:20 scheme wherein the term end exam will be of 40 marks each paper while 10 marks will be through internal evaluation for each paper.

A. Theory Examination

- ✓ Equal weightage shall be given to all units of the theory paper
- ✓ Total number of questions – 03
- ✓ Question one will carry-08Marks,
- ✓ Question No. 1 will be of an objective type eight objective will carry-08Marks.
- ✓ Question 2 will be descriptive two questions are to be attempted out of three and will carry 16 Marks, 08 Marks each)
- ✓ Question 3 will be short answer type four questions are to be attempted out of six and will carry 16 Marks, 04 Marks each)
- ✓ **Nature of questions** - multiple choice, Descriptive and short answer type.
- ✓ All These questions will be answered in the same answer book

Semester End Theory Assessment 40 marks

- The duration of this exam will be of 1.5 Hrs (90 minutes)
- For each unit there will be at least one question
- All questions shall be compulsory with internal choice within the questions

Nature of question paper

Total Marks: 40

- Instructions: 1. **All questions are compulsory**
2. Figures to the **RIGHT** indicate **FULL MARKS**

Nature of Question paper

Q.1 Multiple choice questions (08-Questions) ---- 08 marks

Q.2 Attempt **any two** of the following.

(Essay type/Broad answer questions) --- 16marks

A)

B)

C)

Q.3 Write short notes (**anyfour**)---- 16marks

a)

b)

c)

d)

e)

f)

B. Internal assessment 20%

Sr No	Evaluation type(Any one of the following)	Marks
1.	Evaluation modalities: 1. Assignments that can include a. Essay Writing b. Solving Subjective Questions c. Problem Solving d. Report on lab/industry visit e. Any other subject/content specific assignments 2. Project based learning activities a. Group Discussion b. Research/Case studies c. Seminar Presentations d. Skits e. Poster Presentation f. Debate 3. Self-study/Class test 4. MCQ test	10

PRACTICAL EXAMINATION

- There will be semester wise practical examination to be conducted at the end of each semester. The question paper along with marking scheme and skeleton / Question paper will be given by BOS before practical examination.
- Total marks -50 for each semester -I and II (Will be evaluated by Internal examiner.)
- Total-50 Marks for each Sem-III and IV (Will be evaluated by one Internal examiner and one external examiner)
- Total-100 Marks (4 credit course) for each Sem-V and VI (Will be evaluated by two external examiner)
- Total-50 Marks (2 credit course) for each Sem-V and VI (Will be evaluated by one Internal examiner and one external examiner)
- Nature of question paper for practical examination will be provided by BOS before the practical examination.