INSTITUTE OF SCIENCE, NAGPUR

(An Autonomous Institute of Government of Maharashtra)

DIRECTION NO. 3 OF 2023

DIRECTION RELATING TO THE EXAMINATION LEADING TO THE

FOUR-YEAR BACHELOR OF SCIENCE (HONORS/RESEARCH) DEGREE

WITH A SEMESTER PATTERN

IN INSTITUTE OF SCIENCE, NAGPUR AS PER NEP 2020

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Whereas, Maharashtra Universities Act, 2016 (hereinafter referred to as Act) has come into force from 2016-17 and was amended from time to time,

AND

Whereas, Maharashtra Government issued a Government Resolution Number एनईपी-२०२२/प्र. क्र. ०९/ विशी – ३ शिकाना dated 20 April 2023 regarding guidelines for the Four-Year Bachelor of Science (Honors/Research) Degree with semester pattern,

AND

Whereas, the Board of Studies in all the Science subjects in their meeting prepared the syllabi and scheme of examination for the Four Year Bachelor of Science (Honors / Research) Degree with Semester Pattern

AND

Whereas, Dr. Abhay Khamborkar, the Academic Coordinator has considered, accepted and recommended to the Academic Council, Institute of Science, Nagpur with draft direction and other details

AND

Whereas, the Academic Council, Institute of Science, Nagpur in its emergent meeting has accepted and forwarded to the Director, Institute of Science, Nagpur with draft direction and other details

AND

I, Dr. Jairam Khobragade, Director, Institute of Science, Nagpur do hereby issue the following Direction.

1. This Direction may be called, **"Direction relating to the examination leading to the Four Year Bachelor of Science (Honors / Research) Degree with Semester Pattern in Institute of Science, Nagpur as per NEP 2020".**

2. This direction shall come into force with effect from the date of its issuance.

3. Details of Eligibility for B.Sc Semester I Admission

a. The candidate should have passed the 12th Standard Examination of the Maharashtra State Board of Secondary and Higher Secondary Education/CBSE/ICSE, with English at Higher or Lower level and any Modern Indian Language at higher or lower level together with any three science subjects comprised in the Faculty of Science or an examination recognized as equivalent thereto in such subjects and with such standards of attainments as may be prescribed;

<div align="center">OR</div>

b. 12th Standard Examination of Maharashtra State Board of Secondary and Higher Secondary and offering Education in Vocational/Bi-focal Stream with one language only with any three science subjects comprised in the faculty of Science OR any other examination recognized as equivalent thereto in such subjects and with such standards of attainments as may be prescribed by Minimum Competency Vocational Courses (MCVC).

<div align="center">OR</div>

c. Any other Equivalent Examination of any State in (10+2) pattern with any three science subjects comprised in the Faculty of Science or an examination recognized as equivalent thereto in such subjects and with such standards of attainments as may be prescribed.

<div align="center">OR</div>

d. Eligibility prescribed by the RTM Nagpur University, Nagpur

4. Types of Courses

A student admitted to this program is required to undergo and successfully complete the following types of courses as mentioned in the scheme of examination:

Table 1: Types of Courses and Choice for Selection

S.No	Course Type	Choice for Selection
1	Major (Core) Subject	A student is required to select her/his 'MAJOR' subject from amongst the choices provided in this scheme of examination before filling out the examination form for 1st Semester. Change of major subject shall not be permitted after the examination form is submitted. The major subject comprises Mandatory and Elective Courses.
2	Minor Subject	A student is required to select her/his 'MINOR' subject from amongst the choices provided in this scheme of examination before filling out the examination form for 3rd Semester. Change of minor subject shall not be permitted after the examination form for the 3rd Semester is submitted.
3	Open Elective Course (OE)	A student is required to select an 'OPEN ELECTIVE' from the 'Open Elective Basket' offered by the Institute of Science, Nagpur before filling out the examination form for the semester concerned. Such an 'OPEN ELECTIVE' cannot be selected from the subjects chosen by a student as 'Major' and 'Minor' subjects. A student is allowed to earn credits for 'OPEN ELECTIVE' by successfully completing courses of equivalent credits from the Cluster of Colleges identified by the Institute of Science, Nagpur. A student is also allowed to earn credits for 'OPEN ELECTIVE' by successfully completing online courses of equivalent credits from SWAYAM/NPTEL learning platforms or other Higher Education Institutions affiliated with RTM Nagpur University. However, this needs to be informed by the student to the Institute before the commencement of the semester and an application for transfer of credits is required to be made by the student.
4	Vocational Skill Course (VSC)	A student is required to successfully complete the 'VOCATIONAL SKILL COURSE' from the Basket offered by the Institute of Science, Nagpur for this purpose. This course must be a course corresponding to the 'MAJOR' and/or MINOR subject selected by a student. A student is allowed to earn credits for a 'VOCATIONAL SKILL COURSE' by successfully completing online courses of equivalent credits from SWAYAM/NPTEL learning platforms or other Higher Education Institutions affiliated to RTM Nagpur University provided they are approved by the competent authority of the Institute of Science, Nagpur. However, this needs to be informed by the student to the Institute before the commencement of the semester and an application for transfer of credits is required to be made by the student.

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5	Skill Enhancement Course (SEC)	A student is required to select a 'SKILL ENHANCEMENT COURSE' from the Basket offered by the Institute of Science, Nagpur for this purpose. A separate notification and guidelines in this regard shall be displayed by the Institute on its website. A student is allowed to earn credits for the 'SKILL ENHANCEMENT COURSE' by successfully completing online courses of equivalent credits from SWAYAM/NPTEL learning platforms or other Higher Education Institutions affiliated with RTM Nagpur University provided they are approved by the competent authority of the Institute of Science, Nagpur or the courses from Sector Skill Council. However, this needs to be informed by the student to the Institute before the commencement of the semester and an application for transfer of credits is required to be made by the student.
6	Ability Enhancement Course (AEC)	A student is required to undergo and successfully complete the 'ABILITY ENHANCEMENT COURSE' as mentioned in this scheme of examination.
7	Indian Knowledge System Course (IKS)	A student is required to undergo and successfully complete the 'INDIAN KNOWLEDGE SYSTEM COURSE' as mentioned in this scheme of examination
8	Value Education Course (VEC)	A student is required to undergo and successfully complete the 'VALUE EDUCATION COURSE' as mentioned in this scheme of examination.
9	Co-Curricular Course (CC)	A student is required to select a 'Co-Curricular Course' as mentioned in this scheme of examination. The transfer of credit is not permissible for this type of course.
10	Field Project (FP)/ On the Job Training (OJT) /Community Engagement Project (CEP) / Research Project (RP)	A student is required to undergo and successfully complete this course as mentioned in the scheme of examination under the guidance of a supervisor/mentor assigned by the Institute of Science, Nagpur. This course must be corresponding to the 'MAJOR.' This course must be completed at the Institute of Science, Nagpur where the student has taken admission, and transfer of credit is not permissible for this type of course.

5. Duration of the Program, Student Progression Path, and Provisions for Multiple Exit

Duration of the B.Sc. shall be FOUR years with the provision for multiple exits as mentioned here:

Multiple Exit:

Students will have the flexibility to enter a program in odd semesters and exit a program after the successful completion of an even semester as per their future career needs:

a.   A student can exit the program after successful completion of semesters I & II having earned a requisite number of credits as mentioned in the scheme of

examination and additional 'NSQF* Course or Internship' with 4 credits. Such a student shall be eligible for the award of a **'Certificate in Science'** by the Institute of Science, Nagpur.

OR a student can continue the program in 2nd year.

b.   A student can exit the program after successful completion of semesters I, II, III, & IV having earned a requisite number of credits as mentioned in the scheme of examination and additional 'NSQF* Course or Internship' with 4 credits. Such a student shall be eligible for the award of a **'Diploma in Science'** by the Institute of Science, Nagpur.

OR a student can continue the program in 3rd year.

c.   A student can exit the program after successful completion of semesters I, II, III, IV, V & VI having earned a requisite number of credits as mentioned in the scheme of examination. Such a student shall be eligible for the award of a **'Three Year Bachelor of Science'** degree by the Institute of Science, Nagpur.

OR a student can continue the program in 4th year for either HONORS or a RESEARCH degree.

d.   A student, on successful completion of all 8 semesters and having earned a requisite number of credits as mentioned in the scheme of examination shall be eligible for the award of either **'Bachelor of Science (Honors) Degree with Major and Minor'** OR **'Bachelor of Science (Honors with Research) Degree with Major and Minor'**.

Table 2: Eligibility for Award of Certificate/Diploma/Degree/Honors or Research Degree

Levels	Qualification Title	Additional Credits to be Earned	Credit Earned	Semester	Year
4.5	UG Certificate in Science OR Continue with Major	4 (NSQF* Course or Internship)	44	2	1
5.0	UG Diploma in (Major & Minor) OR Continue with Major	4 (NSQF* Course or Internship)	88	4	2
5.5	Three Year Bachelor's Degree in Science OR Continue with Major & Minor	Not Required	132	6	3
6.0	Bachelor of Science (Honors) Degree with Major and Minor OR Bachelor of Science (Honors with Research) Degree with Major and Minor	Not Required	176	8	4

6. Re-entry or Lateral Entry

a. Students, opting for an exit at any level, will have the option to re-enter the programme from where they had left off, within THREE years of exit and complete the degree programme within the stipulated maximum period of SEVEN years from the date of admission to the first year.

b. Re-entry at various levels for lateral entrants in academic programmes shall be based on the earned and valid credits as deposited and accumulated in the Academic Bank of Credits (ABC) through Registered Higher Education Institutions (RHEI) and proficiency test records.

c. Lateral entry into the programme of study leading to the UG Diploma / Three Year UG Degree / Four Year Bachelor's Degree with Honors/Research will be based on the validation of prior learning outcomes achieved and subject to availability of seats based on intake capacity.

7. Availability of Major subjects and Intake Capacity

Institute Science, Nagpur offers the following Major Subjects to the Students for Four Year Bachelor of Science (B.Sc.) in

Table 3: List Major subjects with Intake Capacity

S.No.	Subject Options for Major	Intake Capacity
1	Physics	46
2	Chemistry	46
3	Mathematics	46
4	Statistics	28
5	Zoology	28
6	Botany	28
7	Environmental Science	18
8	Computer Science	--
9	Electronics	--
	Total	240

8. Minor Subjects

Institute of Science, Nagpur will offer MINOR's subject/s as mentioned in Table 4 for the Four Year B. Sc. Program. It is mandatory for the students to choose only one Minor subject which obviously will be other than the Major subject she/he has already chosen. Once the Minor subject is chosen, a student must pursue all the courses from the basket of that Minor only.

Table 4: List Minor subjects and Intake Capacity with Eligibility

S.No.	Subject Options for Minor	Intake Capacity	Eligibility (Students having major subject as)
1	Physics	40	Chemistry or Mathematics or Statistics
2	Chemistry	40	Physics or Mathematics or Zoology, Botany or Environmental Science
3	Mathematics	40	Physics or Chemistry or Statistics
4	Statistics	24	Physics or Mathematics
5	Zoology	24	Chemistry or Botany or Environmental Science
6	Botany	24	Chemistry or Zoology or Environmental Science
7	Environmental Science	12	Chemistry or Zoology or Botany
8	Computer Science	18	Physics or Mathematics or Statistics
9	Electronics	18	Physics or Mathematics
	Total	240	

9. Course Code

Courses are structured in the form of codes which are segregated based on learning's outcomes, level of difficulties and academic rigor (As per UGC draft on 'Curricular Framework and Credit Systems for the Four-Year Undergraduate Programme' and 'revised report submitted by Dr. Ravindra Kulkarni Committee dated 4th November 2022'). The illustration is as follows

Bachelor of Science		Two letter Subject Code	Year	Semester	Course Number in ascending order (Initial number is '1')	Two letter for theory or practicalSubject Code
B	-	e.g. for STATISTICS code is 'ST'	e.g. For first year code is '1', for the second year the code is '2' and so on	e.g. For first semester code is '1'	e.g. For first paper code is '1'	e.g. For theory paper code is 'T' and for practical the code is "P"
For example, Statistics Theory Paper I in the first semester will have a courses code as						
B-ST111T						
For example, Statistics Theory Paper II in the first semester will have a courses code as						
B-ST112T						
For example, Statistics practical after theory two in the first semester will have a courses code as						
B-ST113P						

10. Teaching and Examination Schemes:

Teaching and Examination Schemes Four Year B.Sc. (of eight semesters) programme is as follows.

Table 5: B.Sc. Semester I

Sr No	Course Category	Name of the course (Title of the Paper)	Level	Theory Th	Tutorial Tu	Practical P	Total Credit	Duration of Examination (Hrs)	End Semester Evaluation (ESE)	Continuous Internal Evaluation (CIE)	Minimum Passing Marks
1	DSC	Paper 1:-	4.5	2	--	--	2	2	40	10	20
		Paper 2:-		2	--	--	2	2	40	10	20
		DSC Lab		--	--	4	2	4 – 6	40	10	25
2	GE	Refer to GE Basket		2	--	--	2	2	40	10	20
		Refer to GE Basket		2	--	--	2	2	40	10	20
3	VSEC	Refer VSC Basket		--	--	4	2	4 - 6	40	10	25
		Refer SEC Basket		--	--	4	2	4 - 6	40	10	25
4	AEC	English Compulsory		2	--	--	2	2	40	10	20
5	VEC	Environmental Studies		2	--	--	2	2	40	10	20
6	IKS	Indian Knowledge System		2	--	--	2	2	40	10	20
7	CC	NSS /NCC / Sports / Cultural		--	--	4	2	--	25	25	25
	Total			14	--	16	22	--	425	125	--

Table 6: B.Sc. Semester II

Sr No	Course Category	Name of the course (Title of the Paper)	Level	Teaching Scheme (hrs)			Total Credit	Evaluation Scheme			
				Theory	Tutorial	Practical					
				Th	Tu	P		Duration of Examination (Hrs)	End Semester Evaluation (ESE)	Continuous Internal Evaluation (CIE)	Minimum Passing Marks
1	DSC	Paper 1:-	4.5	2	--	--	2	2	40	10	20
		Paper 2:-		2	--	--	2	2	40	10	20
		DSC Lab		--	--	4	2	4 – 6	40	10	25
2	GE	Refer to GE Basket		2	--	--	2	2	40	10	20
		Refer to GE Basket		2	--	--	2	2	40	10	20
3	VSEC	Refer VSC Basket		--	--	4	2	4 - 6	40	10	25
		Refer SEC Basket		--	--	4	2	4 - 6	40	10	25
4	AEC	English Compulsory		2	--	--	2	2	40	10	20
5	VEC	Constitution of India		2	--	--	2	2	40	10	20
6	IKS	Indian Knowledge System		2	--	--	2	2	40	10	20
7	CC	NSS /NCC / Sports / Cultural		--	--	4	2	--	25	25	25
Total				14	--	16	22	--	425	125	--

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<p align="center">**Table 7: B.Sc. Semester III**</p>

Sr No	Course Category	Name of the course (Title of the Paper)	Level	Teaching Scheme (hrs) Theory Th	Tutorial Tu	Practical P	Total Credit	Duration of Examination (Hrs)	End Semester Evaluation (ESE)	Continuous Internal Evaluation (CIE)	Minimum Passing Marks
1	DSC	Paper 1:-		2	--	--	2	2	40	10	20
		Paper 2:-		2	--	--	2	2	40	10	20
		DSC Lab		--	--	4	2	4 – 6	40	10	25
2	Minor	Paper 1:-Refer Minor Basket		2	--	--	2	2	40	10	20
		Paper 2:-Refer Minor Basket		2	--	--	2	2	40	10	20
		Minor Lab	5.0	--	--	4	2	4 - 6	40	10	25
3	GE	Refer to GE Basket		2	--	--	2	2	40	10	20
4	VSEC	Refer VSC Basket		--	--	4	2	4 - 6	40	10	25
5	AEC	Second Language		2	--	--	2	2	40	10	20
6	FP	Field Project		--	--	4	2	4 - 6	25	25	25
7	CC	NSS / NCC / Sports / Cultural		--	--	4	2	--	25	25	25
	Total			12	--	20	22	--	410	140	--

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Table 8: B.Sc. Semester IV

Sr No	Course Category	Name of the course (Title of the Paper)	Level	Teaching Scheme (hrs)			Total Credit	Evaluation Scheme			
				Theory	Tutorial	Practical		Duration of Examination (Hrs)	End Semester Evaluation (ESE)	Continuous Internal Evaluation (CIE)	Minimum Passing Marks
				Th	Tu	P					
1	DSC	Paper 1:-	5.0	2	--	--	2	2	40	10	20
		Paper 2:-		2	--	--	2	2	40	10	20
		DSC Lab		--	--	4	2	4 – 6	40	10	25
2	Minor	Paper 1:-Refer Minor Basket		2	--	--	2	2	40	10	20
		Paper 2:-Refer Minor Basket		2	--	--	2	2	40	10	20
		Minor Lab		--	--	4	2	4 - 6	40	10	25
3	GE	Refer to GE Basket		2	--	--	2	2	40	10	20
4	VSEC	Refer SEC Basket		--	--	4	2	4 - 6	40	10	25
5	AEC	Second Language		2	--	--	2	2	40	10	20
6	CEP	Community Service		--	--	4	2	--	25	25	25
7	CC	NSS / NCC / Sports / Cultural		--	--	4	2	--	25	25	25
	Total			12	--	20	22	--	410	140	--

Table 9: B.Sc. Semester V

Sr No	Course Category	Name of the course (Title of the Paper)	Level	Teaching Scheme (hrs)			Total Credit	Evaluation Scheme			
				Theory	Tutorial	Practical		Duration of Examination (Hrs)	End Semester Evaluation (ESE)	Continuous Internal Evaluation (CIE)	Minimum Passing Marks
				Th	Tu	P					
1	DSC	Paper 1:-	5.5	3	--	--	3	3	60	15	30
		Paper 2:-		3	--	--	3	3	60	15	30
		DSC Lab		--	--	6	3	6	60	15	38
2	DSE	Elective 1:-		2	--	--	2	2	40	10	20
		DSE Lab		--	--	4	2	4 - 6	40	10	25
3	Minor	Paper 1:-Refer Minor Basket		2	--	--	2	2	40	10	20
		Paper 2:-Refer Minor Basket		2	--	--	2	2	40	10	20
		Minor Lab		--	--	4	2	4 - 6	40	10	25
4	VSEC	Refer VSC Basket		--	--	4	2	4 - 6	40	10	25
5	CEP	Community Service		--	--	2	1	--	--	25	13
				12	--	20	22		420	130	--

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Table 10: B.Sc. Semester VI

Sr No	Course Category	Name of the course (Title of the Paper)	Level	Teaching Scheme (hrs)			Total Credit	Evaluation Scheme			
				Theory	Tutorial	Practical					
				Th	Tu	P		Duration of Examination (Hrs)	End Semester Evaluation (ESE)	Continuous Internal Evaluation (CIE)	Minimum Passing Marks
1	DSC	Paper 1:-	5.5	3	--	--	3	3	60	15	30
		Paper 2:-		3	--	--	3	3	60	15	30
		DSC Lab		--	--	6	3	6	60	15	38
2	DSE	Elective 2:-		2	--	--	2	2	40	10	20
		DSE Lab		--	--	4	2	4 - 6	40	10	25
3	Minor	Paper 1:-Refer Minor Basket		2	--	--	2	2	40	10	20
		Minor Lab		--	--	2	1	2	20	5	13
4	VSEC	Refer VSC Basket		--	--	4	2	4 - 6	40	10	25
5	OJT	Internship / Apprenticeship (Related to DSC)		--	--	8	4	4 – 6	80	20	50
				10	--	24	22		440	110	--

Table 11: B.Sc. Semester-VII (Honors)

Sr No	Course Category	Name of the course (Title of the Paper)	Level	Teaching Scheme (hrs)			Total Credit	Evaluation Scheme			
				Theory	Tutorial	Practical					
				Th	Tu	P		Duration of Examination (Hrs)	End Semester Evaluation (ESE)	Continuous Internal Evaluation (CIE)	Minimum Passing Marks
1	DSC	Paper 1:-	6.0	4	--	--	4	3	80	20	40
		Paper 2:-		4	--	--	4	3	80	20	40
2	DSE	Elective:-		4	--	--	4	3	80	20	40
3	DSC /DSE	Lab		--	--	12	6	6	100	50	75
4	RM	Research Methodology		4	--	--	4	3	80	20	40
				16	--	12	22		420	130	--

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Table 12: B.Sc. Semester-VIII (Honors)

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Sr No	Course Category	Name of the course (Title of the Paper)	Level	Teaching Scheme (hrs)			Total Credit	Evaluation Scheme			
				Theory	Tutorial	Practical		Duration of Examination (Hrs)	End Semester Evaluation (ESE)	Continuous Internal Evaluation (CIE)	Minimum Passing Marks
				Th	Tu	P					
1	DSC	Paper 1:-	6.0	4	--	--	4	3	80	20	40
		Paper 2:-		4	--	--	4	3	80	20	40
2	DSE	Elective		4	--	--	4	3	80	20	40
3	DSC /DSE	Lab		--	--	12	6	6	100	50	75
4	OJT	Internship / Apprenticeship (Related to DSC)		--	--	8	4	4 – 6	80	20	50
				12	--	20	22		420	130	--

Table 13: B.Sc. Semester-VII (Honors with Research)

Sr No	Course Category	Name of the course (Title of the Paper)	Level	Teaching Scheme (hrs) Theory Th	Tutorial Tu	Practical P	Total Credit	Duration of Examination (Hrs)	End Semester Evaluation (ESE)	Continuous Internal Evaluation (CIE)	Minimum Passing Marks
1	DSC	Paper 1:-		4	--	--	4	3	80	20	40
		Paper 2:-		4	--	--	4	3	80	20	40
2	DSE	Elective	6.0	4	--	--	4	3	80	20	40
3	DSC /DSE	Lab		--	--	4	2	4 – 6	40	10	25
4	RM	Research Methodology		4	--	--	4	3	80	20	40
5	RP	Research Project / Dissertation (Core)		--	--	8	4	--	50	50	50
				16	--	12	22		410	140	--

Table 14: B.Sc. Semester-VIII (Honors with Research)

Sr No	Course Category	Name of the course (Title of the Paper)	Level	Teaching Scheme (hrs) Theory Th	Tutorial Tu	Practical P	Total Credit	Duration of Examination (Hrs)	End Semester Evaluation (ESE)	Continuous Internal Evaluation (CIE)	Minimum Passing Marks
1	DSC	Paper 1:-	6.0	4	--	--	4	3	80	20	40
		Paper 2:-		4	--	--	4	3	80	20	40
2	DSE	Elective		4	--	--	4	3	80	20	40
3	DSC /DSE	Lab		--	--	4	2	4 – 6	40	10	25
4	RP	Research Project / Dissertation 1 (Core)		--	--	8	4	--	50	50	50
		Research Project / Dissertation 2 (Core)		--	--	8	4	--	50	50	50
				12	--	20	22		380	170	--

Total Credits:

1. Three-Year UG Degree Program: 132
2. Four-Year UG Degree Program: 176

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Table 16: Table showing course category wise credit distribution semester wise

Exit Point / Course Category	Certificate in Science	Diploma in Science	Three Year Bachelor of Science	Bachelor of Science (Honors) Degree	Bachelor of Science (Honors with Research) Degree
Major Credits	12	12	26	36	28
Minor Credits	--	12	9	--	--
GE	8	4	--	--	--
VSEC	8	4	4	--	--
AEC	4	4	--	--	--
VEC	4	--	--	--	--
IKS	4	--	--	--	--
CC	4	4	--	--	--
FP	--	2	--	--	--
CEP	--	2	1	--	--
OJT	--	--	4	4	--
RP	--	--	--	--	12
RM	--	--	--	4	4
Total Credits	44	44	44	44	44

Table 16: Table showing total marks in theory and Practical semester wise

Semester	Theory	Practical	Total Marks
1	350	200	550
II	350	200	550
III	300	250	550
IV	300	250	550
V	300	250	550
VI	250	300	550
VII (Honors)	400	150	550
VIII (Honors)	300	250	550
VII (Honors with Research)	400	150	550
VIII (Honors with Research)	300	250	550
For Honors	**2550**	**1850**	**4400**
For Research	**2550**	**1850**	**4400**

11.   Credit Specifications:

a.   Theory/Tutorial Courses: One hour/credit/week (a minimum of 15 hours of teaching per credit is required in a semester.

b.   Laboratory/Performance-Based Courses: A minimum of 30 hours in laboratory or Performance Based activities is required in a semester. Performance-based activities include Workshop based activities, internships, Apprenticeships, Field-based learning, community engagement learning, etc.

c.   Each semester will consist of at least 15 weeks of Academic Work equivalent to 90 actual teaching days.

12.   Assessment

The assessment Plan will consist of Continuous Internal Evaluation (CIE) and End Semester Evaluation (ESE) for each course/subject taken together.

(A)   Continuous Internal Evaluation (CIE) will be based

(a)   Attendance of the student during a particular semester

(b)   An assignment (min. two) based on curriculum to be assessed by the teacher concerned

(c)   Subject-wise class test (min. two) or activities conducted by the teacher concerned with proper rubrics.

(d)   Expected classroom activities shall consist of Group Discussions, Seminars, PowerPoint Presentations, Elocution, Debate, Role Play, Case Studies, Educational Games, etc. The teacher is expected to undertake a minimum of four of the aforesaid activity.

(e)   The CIE marks will be communicated to the examination cell at the end of each semester, but before the semester end examinations / as instructed by the Examination Cell. These marks will be considered for the declaration of the results.

(f)   The record of internal marks, evaluation & results should be maintained for a min. period of three years by the respective department for verification by the competent authority.

(B)   End Semester Evaluation (ESE)

(a)   Pattern of Theory Question Paper of 80 marks

1.   There will be four units in each paper.

2.   Maximum marks for each theory paper will be 80.

3.   Question paper will consist of five questions, each of 16.

4.   Four questions will be on four units with internal choice (One question on each unit).

5. Fifth question will be compulsory with questions from each of the four units having equal weightage and there will be no internal choice.

(b) Pattern of Theory Question Paper of 60 marks

1. There will be four units in each paper.

2. Maximum marks for each theory paper will be 60.

3. Question paper will consist of five questions, each of 12 marks.

4. Four questions will be on four units with internal choice (One question on each unit).

5. Fifth question will be compulsory with questions from each of the four units having equal weightage and there will be no internal choice.

(b) Pattern of Theory Question Paper of 40 marks

1. There will be four units in each paper.

2. Maximum marks for each theory paper will be 40.

3. Question paper will consist of five questions, each of 08 marks.

4. Four questions will be on four units with internal choice (One question on each unit).

5. Fifth question will be compulsory with questions from each of the four units having equal weightage and there will be no internal choice.

13. Standard of Passing

The scope of the course, percentage of passing in Theory and Project, and Internal Assessment will be governed as per the following rules:

(i) To pass the Bachelor of Science (B.Sc.) 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, and 8th Semester Examinations, an examinee shall obtain not less than 40 % (Grade 4) marks in each theory course/paper, taking CIE & SEE together. Whereas, for practical/performance-based examinations an examinee shall obtain not less than 50 % marks in each practical, taking CIE & SEE together.

(ii) An examinee who is unsuccessful at the examination shall be eligible for admission to the subsequent examinations on payment of a fee prescribed for the examination together with the conditions of the ordinance in force from time to time.

14. General Guidelines

a. A student will be eligible for the fourth year of a four-year Research Degree only when she/he scores a minimum 7.5 CGPA or 75% in a three-year degree.

b. 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.

c. The baskets of Elective & Vocational Skill Courses are related to the Major and are given at the end of the scheme.

f.   The baskets of Open Elective Courses, Skill Enhancement Courses and Minor Courses being common will be available at the end (after the scheme of all Major subjects) in the form of Annexures.

g.   The provisions of the award of grace marks for passing an examination, and securing higher grades in the subject(s) shall be issued by the Institute of Science, Nagpur separately and shall apply to the examination under this direction.

h.   The absorption scheme shall be issued by the Institute of Science, Nagpur separately and shall apply to the examination under this direction.

i.   Successful examinees at the B. Sc. Sem I, II, III, IV, V, VI, VII, and VIII Examinations shall be entitled to receive a grade card signed by the **Controller of Examination and Evaluation of Institute of Science, Nagpur (COEE)** and Director, Institute of Science, Nagpur and successful examinees opting for the exit at the end B. Sc. Sem II, IV, VI, and VIII Examinations shall, on payment of prescribed fees, receive a Degree certificate in the prescribed format, signed by the Director, Institute of Science, Nagpur and Vice-Chancellor of RTM Nagpur University.

15.   Guidelines for Performance grading

The PERFORMANCE GRADING of a student shall be on the TEN Points Scale. Depending on the marks scored in a subject, the student is given a Grade. Each grade has got certain grade points.

Table 16: Grade Conversion Table (Theory)

Letter Grade	Grade point	Marks obtained out of **100** marks	Marks obtained out of **75** marks	Marks obtained out of **50** marks
O	**10**	$90 - 100$	$68 - < 75$	$45 - < 50$
A+	**09**	$80 - < 90$	$60 - < 68$	$40 - < 45$
A	**08**	$70 - < 80$	$52 - < 60$	$35 - < 40$
B+	**07**	$60 - < 70$	$45 - < 52$	$30 - < 35$
B	**06**	$55 - < 60$	$41 - < 45$	$28 - < 30$
C	**05**	$50 - < 55$	$38 - < 41$	$25 - < 28$
P	**04**	$40 - < 50$	$30 - < 38$	$20 - < 25$
F	**0**	< 40	< 30	< 20
Ab	**0**	AB	AB	AB

Table 16: Grade Conversion Table (Practical)

Letter Grade	Grade point	Marks obtained out of **175** marks	Marks obtained out of **100** marks	Marks obtained out of **75** marks	Marks obtained out of **50** marks	Marks obtained out of **25** marks
O	10	158 – 175	90 – 100	68 – 75	45 – 50	23 – 25
A+	09	140 – < 158	80 – < 90	60 – < 68	40 – < 45	20 – < 23
A	08	123 – < 140	70 – < 80	53 – < 60	35 – < 40	18 – < 20
B+	07	105 – < 123	60 – < 70	45 – < 53	30 – < 35	15 – < 18
B	06	96 – < 105	55 – < 60	41 – < 45	28 – < 30	14 – < 15
P	04	88 - < 96	50 - < 55	38 - < 41	25 - < 28	13 - < 14
F	0	< 88	< 50	< 38	< 25	< 13
Ab	0	AB	AB	AB	AB	AB

16. Computation of SGPA and CGPA

Following is the procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

i. The SGPA is the ratio of the 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 in all the courses undergone by a student, i.e

SGPA (Si) = Σ(Ci x Gi) / Σ Ci

where C_i is the number of credits of the ith course and G_i is the grade point scored by the student in the ith course.

ii. 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 program, i.e.

CGPA = Σ (Ci x Si) / Σ Ci

where S_i is the SGPA of the ith semester and C_i is the total number of credits in that semester.

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

iv. CGPA to Percentage (%) conversion formula: Percentage (%) = (CGPA) * 10

- Based on the above recommendations on Letter grades, grade points, and SGPA and CGPA, the Institute of Science, Nagpur may issue the transcript for each semester and a consolidated transcript indicating the performance in all semesters.

17.   Abbreviations Used

Continuous Internal Evaluation: (CIE)   End Semester Evaluation: (ESE)

Generic/Open Electives: OE, Vocational Skills & Skill Enhancement Courses: VSEC, Vocational Skill Courses: VSC, Skill Enhancement Courses: SEC, Ability Enhancement Courses: AEC, Indian Knowledge Systems: IKS, Value Education Courses: VEC, On Job Training (Internship/Apprenticeship): OJT, Field Project: FP, Community Engagement & Service: CEP, Co-curricular Courses: CC, Research Methodology: RM, Research Project: RP