राष्ट्रीय शैक्षणिक धोरण, २०२० ची राज्यातील अंमलबजावणीच्या अनुषंगाने गठीत करण्यात आलेल्या सुकाणू समितीच्या शिफारशींनुसार अभ्यासक्रम आराखडा, श्रेयांक आराखडा बाबत सुधारित मार्गदर्शक सूचना.

महाराष्ट्र शासन
उच्च व तंत्र शिक्षण विभाग
शासन निर्णय क्रमांक: एनईपी-२०२२/प्र.क्र.०९/विशि-३/शिकाना

मंत्रालय, मुंबई ४०० ०३२,
दिनांक: २० एप्रिल, २०२३

संदर्भः- १. शासन निर्णय क्रमांक: एनईपी-२०२२/प्र.क्र.१०५/विशि-३, दि.०६.१२.२०२२
२. शासन निर्णय क्रमांक: एनईपी-२०२२/प्र.क्र.०९/विशि-३/शिकाना, दिनांक २६.१२.२०२२

प्रस्तावना-

भारताला ज्ञान महासत्ता बनविण्यासाठी, विद्यार्थ्यांमध्ये आवश्यक कौशल्य व ज्ञानप्राप्ती आणि विज्ञान, तंत्रज्ञान, शिक्षण आणि औद्योगिक क्षेत्रामधील मनुष्यबळाची कमतरता दूर करण्यासाठी, भारतातील लोकसंख्येला गुणवत्तापूर्ण शिक्षण, नाविन्यपूर्ण शिक्षण व संशोधनाच्या सुविधा उपलब्ध करुन देण्यासाठी, भारत सरकारने नवीन राष्ट्रीय शैक्षणिक धोरण- २०२० लागू केलेले आहे. नवीन शैक्षणिक धोरणामध्ये सर्वांगीण आणि बहुविद्याशाखीय शिक्षण प्रणालीचा अंतर्भाव करण्यात आला असून ज्याचा उद्देश मानवाच्या सर्व क्षमतांचा नैतिक - एकात्मिक पद्धतीने विकास करणे आहे.

दि.२६.०४.२०२२ च्या शासन निर्णयान्वये गठीत करण्यात आलेल्या डॉ. रविंद्र कुलकर्णी, माजी प्र-कुलगुरु, मुंबई विद्यापीठ, मुंबई यांच्या अध्यक्षतेखालील उपसमितीने सादर केलेल्या अहवालाच्या अनुषंगाने अभ्यासक्रम व श्रेयांक आराखड्या संदर्भात दि.०६.१२.२०२२ च्या शासन निर्णयान्वये निर्देश जारी करण्यात आले आहेत.

राष्ट्रीय शैक्षणिक धोरण, २०२० ची राज्यातील अंमलबजावणीच्या अनुषंगाने गठीत उपसमित्यांच्या अहवालातील शिफारशींच्या अंमलबजावणीसंदर्भात आढावा घेऊन येणा-या अडचणी निवारणासाठी उपाययोजना सुचविण्यासाठी व मार्गदर्शन करणेसाठी दि. २६.१२.२०२२ च्या शासन निर्णयान्वये स्थापन करण्यात आलेल्या सुकाणू समितीने अभ्यासक्रम व श्रेयांक आराखड्यासंदर्भात अंतरिम अहवाल सादर केला होता. सदर अंतरिम अहवालावर दि. १९ व २० एप्रिल, २०२३ रोजी मा. मंत्री, उच्च व तंत्रशिक्षण यांच्या अध्यक्षतेखाली आयोजित करण्यात आलेल्या चर्चासत्रामध्ये साधकबाधक चर्चा होऊन सदर अहवालाच्या अनुषंगाने अभ्यासक्रम व श्रेयांक आराखड्याची राज्यामध्ये एकसमान प्रमाणात अंमलबजावणी होण्यासाठी सर्व अकृषि विद्यापीठे, अभिमत विद्यापीठे, स्वयं अर्थसहाय्यित विद्यापीठे व समूह विद्यापीठे आणि सर्व शैक्षणिक संस्थांसाठी सुधारित सुचना व निर्देश जारी करण्याची बाब शासनाच्या विचाराधीन होती.

शासन निर्णय:-

शैक्षणिक वर्ष २०२३-२४ पासून पहिल्या टप्प्यात, कला, वाणिज्य आणि विज्ञान शाखेतील पदवी व पदव्युत्तर अभ्यासक्रमांसाठी व इतर अभ्यासक्रमांसाठी **(AICTE, PCI, BCI, CoA, NCTE इ. सारख्या नियामक संस्थांची मान्यता आवश्यक असलेले अभ्यासक्रम वगळून)** सोबत जोडलेल्या परिशिष्टानुसार, अभ्यासक्रम व श्रेयांक आराखड्या संदर्भात सुधारित निर्देश जारी करण्यात येत असून सदर निर्देशांची वर्ष २०२३-२४ पासून अंमलबजावणी करण्यात यावी.

सदर निर्देश महाराष्ट्र सार्वजनिक विद्यापीठ अधिनियम, २०१६ मधील कलम ५ (८१) मधील तरतूदीनुसार निर्गमित करण्यात येत आहेत.

सदर निर्देशांच्या अंमलबजावणीबाबतचा आढावा शासनामार्फत सुकाणू समितीच्या माध्यमातून वेळोवेळी घेण्यात येईल.

सदर शासन निर्णय महाराष्ट्र शासनाच्या www.maharashtra.gov.in या संकेतस्थळावर उपलब्ध करण्यात आला असून त्याचा सांकेतांक २०२३०४२०१९२५२६६९०८ असा आहे. हा शासन निर्णय डिजीटल स्वाक्षरीने साक्षांकित करून काढण्यात येत आहे.

महाराष्ट्राचे राज्यपाल यांच्या आदेशानुसार व नांवाने,

AJIT MADHUKARRAO BAWISKAR

Digitally signed by AJIT MADHUKARRAO BAWISKAR
DN: c=IN, o=GOVERNMENT OF MAHARASHTRA, ou=HIGHER AND TECHNICAL EDUCATION DEPARTMENT, 2.5.4.20=deb455609479b6c7f30e7f1f9a8360c0f8600a542859e8fe229d6ea333415e8d, postalCode=400032, st=Maharashtra, serialNumber=99EB92802BDF71EB0FCD2898E209D4991 92AD3899261FEAD42F7D38A3141AB69, cn=AJIT MADHUKARRAO BAWISKAR
Date: 2023.04.21 18:16:28 +05'30'

(अजित बाविस्कर)

उप सचिव, महाराष्ट्र शासन

प्रत,

१. मा. राज्यपाल यांचे प्रधान सचिव, राजभवन, मुंबई,
२. मा. मुख्यमंत्री यांचे प्रधान सचिव, मंत्रालय, मुंबई,
३. मा. उपमुख्यमंत्री यांचे उप सचिव, मंत्रालय, मुंबई,
४. मा. मंत्री, उच्च व तंत्र शिक्षण विभाग, यांचे खाजगी सचिव, मंत्रालय, मुंबई,
५. मा. कुलगुरु, सर्व अकृषि विद्यापीठे, अभिमत विद्यापीठे, स्वयं अर्थसहाय्यित विद्यापीठे व समूह विद्यापीठे.
६. कुलसचिव, सर्व अकृषि विद्यापीठे, अभिमत विद्यापीठे, स्वयं अर्थसहाय्यित विद्यापीठे व समूह विद्यापीठे.
७. संचालक, उच्च शिक्षण/ तंत्रशिक्षण/ कला/ ग्रंथालय.
८. अध्यक्ष,एनईपी सुकाणू समिती.
९. सदस्य सचिव, एनईपी सुकाणू समिती.
१०. प्रधान सचिव, उच्च व तंत्र शिक्षण विभाग, यांचे स्वीय सहाय्यक, मंत्रालय, मुंबई,
११. उप सचिव (विशि), उच्च व तंत्र शिक्षण विभाग, यांचे स्वीय सहाय्यक, मंत्रालय, मुंबई,
१२. निवडनस्ती (विशि-३).

शासन निर्णय क्रमांक: एनईपी-२०२२/प्र.क्र.०९/विशि-३ शिकाना, दिनांक २० एप्रिल, २०२३
सोबतचे परिशिष्ट

DIRECTIVES (निर्देश)

1. NEP Implementation in First Phase:

The credit and curricular framework is to be made applicable, in the first phase, to the following programs (other than those regulated by AICTE, PCI, BCI, CoA, NCTE etc) with effect from Academic Year 2023-24:

UG: B.A., B.Sc., B.Com. and all Non-AICTE professional UG degree programs.

PG: M.A., M.Sc., M.Com. and all Non-AICTE professional PG degree programs.

2. Credit Framework under Three/Four-Years UG Programme with Multiple Entry and Multiple Exit options:

The structure of the Three/Four-year bachelor's degree programme allows the opportunity to the students to experience the full range of holistic and multidisciplinary education in addition to a focus on the chosen major and minors as per their choices and the feasibility of exploring learning in different institutions. The minimum and maximum credit structure for different levels under the Three/Four -year UG Programme with multiple entry and multiple exit options are as given below**:**

Credit Framework

Levels	**Qualification Title**	**Credit Requirements**		**Semester**	**Year**
		Minimum	**Maximum**		
4.5	UG Certificate	40	44	2	1
5.0	UG Diploma	80	88	4	2
5.5	Three Year Bachelor's Degree	120	132	6	3
6.0	Bachelor's Degree-Honours **Or** Bachelor's Degree-Honours with Research	160	176	8	4

(a) Credits offered per Semester will be a Minimum 20 and a Maximum 22. While minimum credits are mandatory as per National Credit Framework, the Universities can evolve the mechanism for providing Semester/ Levelwise credit attainment flexibility within the broad framework.

(b) With effect from Academic Year 2023-24, three years/four years Degree Program will be introduced. Thus, the Fourth year Honours/ Honours with Research program (Level 6.0) will begin with effect from Academic Year 2026-27.

(c) Under four-year UG Degree (Honours with Research), the students will work on a research project or dissertation of 12 credits in the fourth year in the respective Major Subject. The decision regarding the distribution of 12 credits in Semester VII and VIII of fourth year will be taken by Academic Authorities of University/ Autonomous Colleges.

(d) The fourth year of the four-year UG programme will not be granted to any such college as 'natural growth'. The affiliated colleges conducting 3-year UG degree programme will seek permission to commence fourth year UG programme as extension by following the prevailing statutory procedures. However, Colleges already having permission and recognition for the PG degree programme along with UG degree programme in the same Major shall be automatically allowed to continue PG degree programme and conduct the fourth year of UG Honors Degree programme without undergoing any additional procedures. Similarly, the colleges with approved PG programme and Ph.D. Research Centre shall be automatically allowed to continue PG Degree programme and start the fourth year of UG Honors with Research Degree programme without undergoing any additional procedures. For students of Colleges running only three year UG Degree Programme, the University shall evolve suitable mechanisms for admission to fourth-year honours program in other Colleges.

(e) The NEP 2020 curriculum framework offers

i. The flexibility to move from one discipline of study to another;

ii. The opportunity for learners to choose the courses of their interest in all disciplines;

iii. The multiple entry and exit options with the award of UG certificate/ UG diploma/ or three-year degree depending upon the number of credits secured;

iv. The flexibility for learners to move from one institution to another to enable them to have multi and/or interdisciplinary learning;

v. The flexibility to switch to alternative modes of learning (offline, ODL, and Online learning, and hybrid modes of learning).

3. Distribution of Credits across Four Years Degree Programmes:

In general, for the four years' bachelor's degree programme, the distribution of credits will be as follows:

(a) Major (Core) Subject comprising Mandatory and Elective Courses:

i. Minimum 50% of total credits corresponding to Three/Four - year UG Degree- Mandatory Courses offered in all Four years;

ii. 2 credit course on Major Specific IKS shall be included under Major;

iii. Elective courses of Major will be offered in the third and/or final year.

iv. Vocational Skill Courses, Internship/ Apprenticeship, Field Projects, Research Projects connected to Major

(b) Minor Subject: 18-20 Credits

i. The Minor subjects may be from the different disciplines of the same faculty of DSC Major (Core) or they can be from different faculty altogether.

ii. The credits of Minor subjects shall be completed in the first three years of UG Programme.

(c) Generic/ Open Elective Courses (OE): 10-12 credits

i. It is to be offered in I and/or II year

ii. Faculty-wise baskets of OE shall be prepared by University/ Autonomous Colleges.

iii. OE is to be chosen compulsorily from faculty other than that of the Major.

(d) Vocational and Skill Enhancement Courses (VSEC): 14-16 credits

- Vocational Skill Courses (VSC): 8-10 credits, including Hands on Training corresponding to the Major and/or Minor Subject:
  i. To be offered in first three years;
  ii. Wherever applicable vocational courses will include skills based on advanced laboratory practicals of Major
- Skill Enhancement Courses (SEC) : 06 credits
  i. To be offered in I and II year;
  ii. To be selected from the basket of Skill Courses approved by University/ Autonomous Colleges

(e) Ability Enhancement Courses (AEC), Indian Knowledge System (IKS) and Value Education Courses (VEC): 14 Credits

- AEC: 08 credits

i. To be offered in I and II year
ii. English: 04 Credits
iii. Modern Indian Language: 04 credits
iv. To be offered from the Basket approved by University / Autonomous College;

The focus for both languages should be on linguistic and communication skills.

- IKS: 2 Credits
  i. To be offered in I Year
  ii. Courses on IKS to be selected from the basket of IKS courses approved by University/ Autonomous Colleges
- VEC: 04 Credits
  i. To be offered in I year
  ii. Value Education Courses (VEC) such as Understanding India, Environmental Science/Education, and Digital and Technological Solutions.

(f) Field Projects/ Internship/ Apprenticeship/ Community Engagement and Service corresponding to the Major (Core) Subject, Co-curricular Courses (CC) and Research Project

- Internship/Apprenticeship corresponding to the Major (Core) Subject: 8 Credits
- Field Projects/Community Engagement and Service corresponding to the Major (Core) Subject: minimum 4-6 credits
  - To be offered in II, and III years of UG Degree Programmes.
- Co-curricular Courses (CC) such as Health and Wellness, Yoga education sports, and fitness, Cultural Activities, NSS/NCC and Fine/ Applied/ Visual/ Performing Arts: 8 credits
  - To be offered in I and/or II year
  - Research Projects: 12 credits
  - To be offered in the final year for 4 year Honours with Research UG Degree

The UGC Regulations, 2021 permit up to 40% of the total courses being offered in a particular programme in a semester through the **Online Learning Courses** offered through the **SWAYAM** platform and/or other State Level Common Platforms which can be developed in due course with the participation of different Universities/ HEIs.

Illustrative Credit distribution structure for three/ four year Honours/ Honours with Research Degree Programme with Multiple Entry and Exit options

Level	Semester	Major		Minor	OE	VSC, SEC (VSEC)	AEC, VEC, IKS	OJT, FP, CEP, CC, RP	Cum. Cr./ Sem.	Degree/ Cum. Cr.
		Mandatory	Electives							
4.5	I	4- 6 (4+2)		-	2+2	VSC:2, SEC:2	AEC:2, VEC:2,IKS:2	CC:2	20-22	UG Certificate 40-44
	II	4- 6 (4+2)		2	2+2	VSC:2, SEC:2	AEC:2, VEC:2	CC:2	20-22	
	Cum Cr.	8-12	-	2	8	4+4	4+4+2	4	40-44	
Exit option: Award of UG Certificate in Major with 40-44 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor										
5.0	III	6(4+2)-8(2*4)		4	2	VSC:2,	AEC:2	FP:2 CC:2	20-22	UG Diploma 80-88
	IV	6(4+2)-8(2*4)		4	2	SEC:2	AEC:2	CEP: 2 CC:2	20-22	
	Cum Cr.	20-28		10	12	6+6	8+4+2	8+4	80-88	
Exit option; Award of UG Diploma in Major and Minor with 80-88 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor										
5.5	V	8(2*4)-10 (2*4 +2)	4	4-6		VSC: 2-4		FP/CEP: 2	20-22	UG Degree 120-132
	VI	8(2*4)-10 (2*4 +2)	4	4				OJT :4	20-22	
	Cum Cr.	36-48	8	18-20	12	8-10 +6	8+4+2	8+6+4	120-132	
Exit option: Award of UG Degree in Major with 120-132 credits OR Continue with Major and Minor										
6.0	VII	12-14 (2*4 +2*2 or 3*4+2)	4	RM:4					20-22	UG Honours Degree 160-176
	VIII	12-14 (2*4 +2*2 or 3*4+2)	4					OJT:4	20-22	
	Cum Cr.	60-76	16	18-20 +4	12	8-10 +6	8+4+2	8+6+8	160-176	
Four Year UG Honours Degree in Major and Minor with 160-176 credits										
6.0	VII	8-10 (2*4 +2 or 2*4)	4	RM:4				RP: 4	20-22	UG Honours with Research Degree 160-176
	VIII	8-10 (2*4 +2 or 2*4)	4					RP: 8	20-22	
	Cum Cr.	52-68	16	18 -20 +4	12	8-10 +6	8+4+2	8+6+4+ 12	160-176	
Four Year UG Honours with Research Degree in Major and Minor with 160-176 credits										

Abbreviations: Generic/ Open Electives: OE; Vocational Skill and Skill Enhancement Courses: VSEC; Vocational Skill Courses: VSC; Skill Enhancement Courses: SEC; Ability Enhancement Courses: AEC; Indian Knowledge System: IKS; Value Education Courses: VEC; OJT: On Job Training: Internship/ Apprenticeship; Field projects: FP; Community engagement and service: CEP; Co-curricular Courses: CC; RM: Research Methodology; Research Project: RP

Note: The Credit Distribution Table given above is illustrative only. The Universities/ Autonomous Colleges may suitably modify within the broader framework of credit distribution across six verticals.

4. Choice of Major and Minor Subjects/ Discipline

(a) Major (Core) Subject is the discipline or subject of main focus and the degree will be awarded in that discipline/ Subject. Students should secure a minimum 50% of total credits through Core Courses (mandatory courses, electives, vocational courses, Internship/ Field Projects/ Apprenticeship/ Community Engagement Projects, Seminars, and Group Discussion. In addition, Entrepreneurship, IPR and Research Project shall be offered in case of Honours with Research Degree) in Three /Four Years for the award of Major Degree.

(b) Every faculty shall offer different categories of Major (core) Subjects of study:

- ✓ Department Specific Core (DSC)
- ✓ School Specific Core (SSC)

Refer Prof R D Kulkarni Committee Report- Chapter II, section 2.2, P. No. 20-23 for further details on design of different categories of Major/ Core Subjects.

(c) The Steering Committee recommends that to begin with, the SSC concept shall be implemented for the University Campus.

Autonomous Colleges shall have the freedom of choosing between SSC and DSC concepts either fully or faculty wise

The DSC concept shall be implemented at non-autonomous affiliated colleges.

In meantime, the Steering Committee will develop detailed guidelines on the creation of the School structure.

(d) The fourth year of four years honors UG degree shall be identical in structure to the first year of two year PG programmes offered after three year UG programmes.

(e) Students shall select a 'Major (Core) Subject' and a 'Minor Subject' from the lists of various Subject Combinations and Options provided by the State Universities/ Autonomous Colleges.

For students of non-autonomous affiliated colleges, these options will be provided by concerned academic authorities of the respective Universities.

For the award of Minor Degree, the student shall declare the choice of the minor stream at the end of the second semester, after exploring various courses.

5. Courses on Indian Knowledge System (IKS)

The concerned academic authorities, while defining the curriculum for modules/ courses on IKS, may take the support of the Indian Knowledge System (IKS) Cell under the Ministry of Education (MoE) at AICTE, New Delhi which is established to promote interdisciplinary research on all aspects of IKS, preserve and disseminate IKS for further research and societal applications. The IKS Cell has established multiple IKS Centers at different Institutes in various parts of the country to act as a catalyst for initiating research, education, and outreach activities. In addition, the list of courses may be developed and offered in online or offline mode by the parent university or the specialized HEIs.

The courses to be developed under the Indian Knowledge Systems (IKS) are as follows

I. Generic IKS Course: These are expected to contain basic knowledge of the IKS subject. It should contain introductory information to the IKS. The student should be able to acquire a basic knowledge after completion of the course.

II. Subject Specific IKS Courses: These courses should contain advanced information pertaining to the subject as these will be considered as a part of the major credit. The student should have completed the Generic level as a prerequisite before enrolling in the discipline related course.

The universities may evolve their own IKS subject-related courses.

6. Credit Specifications

As per NCrF, the learner engaged time for 40 credits is 1200 hours.

i. Theory Courses: A minimum of 15 hours of teaching per credit is required in a semester.

ii. Laboratory Course: A minimum of 30 hours in laboratory activities per credit is required in a semester.

iii. Studio activities: Studio activities involve the engagement of students in creative or artistic activities. Every student is engaged in performing a creative activity to obtain a specific outcome. Studio-based activities involve visual- or aesthetic-focused experiential work. A minimum of 30 hours in studio activities per credit in a semester is required.

iv. Workshop-based activities: Courses involving workshop-based activities require the engagement of students in hands-on activities related to work/vocation or professional practice. Every student is engaged in performing a skill-based activity

related to specific learning outcome(s). A minimum of 30 hours of workshop-based activities per credit in a semester is required.

v. Seminar/ Group Discussion: A minimum of 15 hours of participation in seminar/ Group Discussion activity per credit in a semester is required.

vi. Internship: Credits for internship shall be one credit per one week of internship (or 30 hours of engagement), subject to a maximum of six credits per Semester. The internship shall be monitored jointly by the faculty and Industry/ Organisation Mentor.

vii. Field-based Learning/ Practices: These are the courses requiring students to participate in field-based learning/projects generally under the supervision of faculty. A minimum of 30 hours of learning activities per credit in a semester is required.

viii. Community engagement and service: These are the courses requiring students to participate in field-based learning/projects generally under the supervision of faculty. The curricular component of 'community engagement and service' will involve activities that would expose students to the socio-economic issues in society so that the theoretical learnings can be supplemented by actual life experiences to generate solutions to real-life problems. 30 hours of contact time per credit in a semester along with 15 hours of activities such as preparation for community engagement and service, preparation of reports, etc., and independent reading and study. Thus, the total learner engaged time would be 180 hours for a 4-credit course.

7. ABC, Admission System, Multiple Entry and Exit Path and Lateral Entry:

(a) Enrolment of Students and Registration of Colleges on ABC

Steering Committee noted that all State Universities have registered on ABC. Now they must promote all affiliated autonomous colleges to register on ABC. Since Credits awarded to a student for one programmes from an institution may be transferred/redeemed by another institution upon the student's consent through ABC, it is essential that all students should get enrolled on ABC, create ABC ID and share these ABC ID with Academic Institutions where they are enrolled. Credits Earned by the student will reflect in the student ABC account.

(b) Multi-institutional learning permission: The student shall be allowed to earn some credits from the institutions/college other than the Main/ Parent College i.e. a college where students earn all their major credits (more than 50%) including credits for the core subject. Students enrolled in the three/four year degree programmes may avail of other

elective credits from two different colleges affiliated to the same University and/or online courses available within the 40% cap mentioned by UGC.

(c) Multiple Exits: Students will have the flexibility to enter a programme in odd semesters and exit a programme after the successful completion of even semesters as per their future career needs.

- ✓ Students exiting the First Year programme after securing minimum 40 credits will be awarded UG Certificate in the relevant Discipline /Subject provided they secure 4 credits in work based vocational courses or internship / Apprenticeship offered during summer vacation in addition to 6 credits from skill-based courses earned during first and second semester.
- ✓ Students exiting the Second Year Programme after securing minimum 80 credits will be awarded UG Diploma in the relevant Discipline /Subject provided they secure additional 4 credits in skill based vocational courses offered during summer vacation after first year or second year.
- ✓ Students exiting the 3-year UG programme will be awarded UG Degree in the relevant Discipline /Subject upon securing minimum 120 credits.
- ✓ Exit options shall be provided with Certification, Diploma and basic Bachelor's degrees to the students at the end of the second, fourth and sixth semester, respectively, in the four-year degree programme. Students will receive a Bachelor's degree with Honors/ Honors with Research on successfully completing all eight semesters of the UG Programmes either at a stretch or with opted exits and re-entries.

(d) Re-entry or Lateral Entry: Students, opting for exits at any level, will have the option to re-enter the programme from where they had left off, in the same or in a different higher education institution within three years of exit and complete the degree programme within the stipulated maximum period of seven years from the date of admission to first year UG. 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. 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 based on intake capacity.

(e) Eligibility for admission to the fourth year of four year Honours with Research Degree Programmes as per UGC guidelines: Minimum CGPA of 7.5 or minimum 75% at three year degree.

8. Design of PG / Master's programmes

The Universities/ Autonomous Colleges will have the flexibility to offer the following PG Degree Options:

(a) A two-year PG programme with one exit option for those who have completed the three-year Bachelor's Degree Programme: Level 6.5, Minimum of 80 and Maximum of 88 credits.

The students, after successful completion of a minimum 40 and maximum of 44 credits in the first year of two-year PG programme may opt for exit. Such students will be awarded the PG Diploma in that relevant subject.

(b) A one-year Master's programme for students who are completing a four-year Bachelor's programme with honours or honours with Research: Level 6.5, minimum of 40 and Maximum of 44 credits.

One Year PG Programme will be introduced by all the Universities with effect from ACADEMIC YEAR 2027-28.

(c) A one-year/two-semester Post-Graduate Diploma programme builds on a three-year Bachelor's degree and requires a minimum of 40 and a maximum of 44 credits: Level 6.0

(d) An integrated five-year Master's programme with multiple entry and exit options at different levels e.g., the student may exit at the end of the third year with a Bachelor's degree, with an entry to a Master's programme in another HEI. A 5-year Integrated Bachelor's and Master's programmes shall have minimum of 200 and maximum of 220 credits.

(e) University and Autonomous Institutes will design curriculum for Two Year PG programs – M.Sc., M. A. and M. Com. as per the guidelines of NEP2020 for commencement with effect from Academic Year 2023-24. This will be offered to the students who have completed their 3 years of UG degree programmes. The PG credit framework will have to be modified as per the guidelines which shall be provided in due course of time.

(f) To begin with, in Academic Year 2023 -24, the specializations in PG Programmes will be based on DSC only. The curricular design of first year of two-year PG Programme will be aligned to that of fourth-year of four year Honors UG

Degree Programmes. Research Methodology (aligned with seventh semester of fourth year of Honors and Honors with Research Degree of four year UG Programmes) and Internship of 4 credits (aligned with the eighth semester of the fourth year of Honors Degree of four year UG Programmes) shall be introduced in the first semester and in the second semester, respectively of first year of Two Year PG Programmes. Second Year PG Programmes will include Research Projects of 10-12 Credits divided uniformly over the third and fourth semester.

9. Directives for State Universities and Colleges

(a) Execution as per Statutory Provisions: The Maharashtra Public Universities Act 2016, Sections 32 and 33 (Academic Council), 34 and 35 (Faculty), 36 and 37 (Board of Deans), 38 and 39 (Board of Sub-campuses), 40 and 41(Board of Studies), 42 and 43 (Board of University Departments and Interdisciplinary studies), and 44 (Board of Post-Graduate Education in Colleges), describes the mechanism of curriculum development, upgradation/ revisions and reforms and the course syllabi, course structures and evaluation schemes of various courses so as to ensure that the university becomes a vibrant hub for the promotion of teaching and learning, skill development, research and development, interactions and linkages with industries, cultivation of intellectual property rights and entrepreneurship and incubation of knowledge linked industries. The Autonomous Colleges, in line with UGC Regulations 'UGC (Conferment of Autonomous Status upon Colleges and Measures for Maintenance of Standards in Autonomous Colleges) dated April 03, 2023, can develop new degree programme(s) at undergraduate and postgraduate levels with the approval of the Academic Council of the college and concerned Statutory Council(s), wherever required, provided the nomenclature of the degree is in consonance with UGC Notification. Thus, these statutory authorities are advised accordingly for the execution of rigorous research-based specialization and opportunities for multidisciplinary work and interdisciplinary thinking through the design and implementation of curricular framework with effect from ACADEMIC YEAR 2023-24 for the Graduate, and Master's level Education based on the recommendations given by Steering Committee and Directives issued by Higher and Technical Education Department, Government of Maharashtra.

(b) Learning Outcome Based Curriculum: In accordance with the international best practices and the current recommendations of NHEQF and National Credit Framework, the framework proposes that the number of credits per year for 1200

learning hours will be 40. The Board of Studies (BoS) and Academic Council (AC) of Universities as well as those of Autonomous Colleges shall adopt Learning Outcomes-based Approach to Curriculum Planning and Development, Teaching, Learning, and Assessment Methods and Practices based on Key Qualification Descriptors and Graduate attributes given by NHEQF. In addition, the respective BoS of Universities should initiate the development of learning materials for effective teaching and learning at different levels of the 3/4 years UG Curricular Programme. Accordingly, the Universities should initiate the training of all faculties on the Learning Outcomes-based Approach, promote wider consultation of Industry Peers and Experts in framing the Curriculum and undertake dissemination of the same amongst all stakeholders including Students.

(c) Strengthening of Industry-Academic Linkages: Field projects/ Internship/ Apprenticeship/ Community Engagement and Service will have a huge role to play in institutionalizing the Curriculum Framework for **Industry-Academia Linkage** and to increase the employability of the students. Moreover, Internships/Apprenticeships have an enormous potential to combine work-based learning with theoretical knowledge of related disciplines/ subjects. In view of this, the Universities are advised to strengthen the Industry-Institute Linkages. Universities and Autonomous Colleges shall hold the interactive meetings with representatives of Industry Associations, MSME, Professional Organisations, Banks and Financial Institutions, NGOs, Sector Skill Councils etc for facilitation of involvement of Industries in smooth conduct of Internships/Apprenticeships programmes for all students. To facilitate further, the Steering Committee will hold interactions with representatives of Industry Associations, Professional Organisations, and Sector Skill Councils.

(d) KRA: Besides transformation as Multidisciplinary HEI, the State Universities and their Affiliated Colleges should undertake the execution of relevant **Key Result Areas (KRA)** as a part of the successful implementation of NEP 2020.

(e) IDP: All Higher Education Institutions (HEIs) will develop an **Institutional Development Plan (IDP)** to assess human resources requirements, in terms of faculty and administrative staff, physical infrastructural facilities, ICT-related technology requirements, Learning infrastructures such as Laboratories, Libraries, CPD requirements, Student Support related areas and Teaching infrastructure as well as the projection of growth and transformations in line with NEP. The HEIs must be committed to the holistic development of students and faculty training and should

work on the establishment of a quality learner support system, infrastructure upgradation, and end-to-end digitization.

(f) Sensitization of Stakeholders: The Universities must devise, articulate and execute the rigorous plan for the sensitization of stakeholders in the immediate future on effective implementation of the new curricular framework with effect from Academic Year 2023-24.

10. Action Plan by Universities and Autonomous Colleges with Timelines

1. Establishment of NEP Implementation Cell at University (headed by PVC) and Autonomous Colleges (headed by Principal): April 30, 2023
2. Adoption of Govt Regulation and Directions through organisation of Emergent and Special Meeting of the Academic Council -April 30, 2023
3. Autonomous Colleges to decide and inform to University on the adoption of SSC and/or DSC Major Option- April 30, 2023
4. To develop, statutorily adopt and release for implementation of faculty-wise Baskets of all 6 verticals viz. - i. Major; ii. Minor; iii. Generic/ Open Elective Courses; iv. Vocational and Skill Enhancement Courses (VSEC); v. Ability Enhancement Courses (AEC), Indian Knowledge System (IKS) and Value Education Courses (VEC); vi. Field projects/ internship/ apprenticeship/ community engagement and service corresponding to the Major Subject, Co-curricular Courses and Research Project and their Combinations to be offered in Mission Mode: May 31, 2023
5. Sensitization of stakeholders on effective implementation of new curricular framework on a continuous basis till the beginning of Academic Year 2023-24
6. Submission of ATR on above-mentioned action points within 10 days of the deadline of same to the Directorate of Higher Education, Govt. of Maharashtra.

Four Year Bachelor of Arts(Honours/Research) Degree Examination

Scheme of Examination for Four Year Bachelor of Arts (B.A.) Program from Academic Session 2023-24

As approved by all the Boards of Studies in the Faculty of Humanitiesin their meetings held on 10t&& 11thMay 2023

&

Placed before the Chairpersons of All the Boards for consideration and approval in its meeting held on 29th May 2023

Preamble:

The Academic Council of RashtrasantTukadojiMaharaj Nagpur University, Nagpur has adopted the Government Resolution No. NEP-2020/प्र.क्र.09/विशी-3/शिकाना dated 20th April 2023 issued by the Government of Maharashtra in its meeting held on 21st April 2023 in view of implementation of National Education Policy, 2020. The Faculty of Humanities, R T M Nagpur University has approved the following '**Teaching and Examination Scheme**' for '**Four Year – Bachelor of Arts (B.A.) Honours/Research Degree with Major and Minor**' in its meeting held on 10th& 11th May 2023 & placed before the Chairpersons of All the Boards for consideration and approval in its meeting held on 29th May 2023. This notification is issued to facilitate the affiliated Colleges and students for smooth conduct of admission process for the year 2024-25. Basic details required at the time of admission are provided in this notification and detailed Direction/Regulation containing comprehensive provisions related to all aspects shall soon be issued by the University.Further, a separate list of the '**Skill Enhancement Courses**' and a list of '**Co-Curricular Courses**' shall also be soon issued by the University.

1. **Details of eligibility for B.A. semester 1 examination**

a) For the **B.A. 1st Semester,** Examinee shall have Passed the 12th Standard Examination of the Maharashtra State Board of Secondary and Higher Secondary Education/CBSE/ICSE, in the faculty of Arts or faculty of Commerce or Faculty of Science, vocational stream, professional courses or an examination recognised as equivalent thereto in such subjects and with such standards of attainments as may be prescribed.

OR

b) 12thStandard Examination of Maharashtra State Board of Secondary and Higher Secondary Education in Vocational Stream with one language only; OR any other examination recognized as equivalent thereto; in such subjects and with such standards of attainments as may be prescribed Minimum Competition vocation course (MCVC).

OR

c) Any other Equivalent Examination of any State in (10+2) pattern with any combination of subjects.

2. **Duration of the Program, student progression path and provisions for Multiple Entry and Exit**
   A. Duration of the B. A. Program shall be FOUR years with the provision for multiple exit as mentioned here:
      a. A student can exit the program after successful completion of 1st and 2nd semesters having earned requisite number of credits as mentioned in the scheme of examination and additional '**Skill Enhancement Course**' with 4 credits. Such a student shall be eligible for the award of '**UG Certificate in ---- (Subject)**' by the University.
      OR a student can continue the program in 2nd year.
      b. A student can exit the program after successful completion of 1st, 2nd, 3rd and 4th semesters having earned requisite number of credits as mentioned in the

scheme of examination and additional '**Skill Enhancement Course**' with 4 credits. Such a student shall be eligible for the award of '**UG Diploma in ----- (Subject)'** by the University.

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

c. A student can exit the program after successful completion of 1st, 2nd, 3rd, 4th, 5th and 6th semesters having earned requisite number of credits as mentioned in the scheme of examination. Such a student shall be eligible for the award of '**Bachelor of Arts**' degree by the University.

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

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

B. Re-entry or Lateral Entry

a. Students, opting for exits at any level, will have the option to re-enter the programme from where they have left off, in the same or in a different higher education institution within three years of exit and complete the degree programme within the stipulated maximum period of SEVEN years from the date of admission to 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 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 Honours/Research will be based on the validation of prior learning outcomes achieved and subject to availability seats based on intake capacity.

Eligibility for Award of Certificate/Diploma/Degree/Honours or Research Degree

Semester Completion	No. of Min. Credits earned	Additional Credits	Eligible For
I and II	40-44	4 credits for NSQF Course/ Course approved by Centre of Life-Long Learning, RTMNU/Internship	UG Certificate in ----(Subject) **OR** Continue with Major
III and IV	80-88	4 credits for NSQF Course/ Course approved by Centre of Life-Long Learning, RTMNU/Internship	UG Diploma in ----(Subject) with Minor **OR** Continue with Major and Minor
V and VI	120-132	Not Required	Bachelor of Arts Degree with Major and Minor **OR** Continue with Major and Minor
VII and VIII	160-176	Not Required	Bachelor of Arts Degree (Honours/Research) With Major and Minor

3. 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:

Sr. No.	Course Type	Choice for Selection
1.	**Major Subject**	A student is required to select a'MAJOR' subject from any one group amongst the groups provided in Table 3 under Clause 4, provided in this scheme of examination in the 1st semester. The last date for selection of 'Major' subject may be decided by the college but it shall not be later than 15 days after commencement of classes for 1st Semester. Change of major subject shall not be permitted after the examination form is submitted. This MAJOR subject will be continued for all semesters.
2.	**Minor Subject**	A student is required to select any one 'MINOR' subject from any one group under Table No. 3 Clause 4 except the subject in the group of MAJOR subject or any other degree program offered by the university in any other faculty at the time of admission to 3rd Semester. Change of 'Minor' subject shall not be permitted after the examination form is submitted. Except MAJOR or Group of MAJOR all other subjects would be considered as MINOR. **For Example**, A student is opting History as MAJOR subject from Group B, will not be able to take the MINOR subject from the same Group B.
3.	**Open Elective Course (OE)**	A student is required to select an '**OPEN ELECTIVE**' from the 'Open Elective Basket' (Annexure ---) of any program offered by the university in any faculty before filling the examination form for the semester concerned. Such an 'OPEN ELECTIVE' cannot be selected from the subjects chosen by a student as 'Major' or 'Minor' subjects. **OR** A student can also earn credits for 'OPEN ELECTIVE' by successfully completing online courses of equivalent credits from SWAYAM/NPTEL learning platforms. **OR** From other Higher Education Institutions affiliated to RTM Nagpur University. **OR** Any other institute of National repute i.e. IIT, IIM, IISC, IIIT, and NIT. However, this need to be informed by the student to the university through the college before the commencement of the semester and an application for transfer of credits is required to be made by the student. **If a student completes an 'OPEN ELECTIVE' from other faculty or online learning platform having more than 3 credits, it will be considered equivalent to 3 credits only**
4.	**Vocational Skill Course (VSC)**	A student is required to successfully complete the '**VOCATIONAL SKILL COURSE**' as mentioned in this scheme of examination. This course must be a course corresponding to the '**MAJOR**' selected by a student. **OR** A student can also earn credits for 'VOCATIONAL SKILL COURSE' by successfully completing online courses of equivalent credits from SWAYAM/NPTEL learning platforms. **OR**

		From other Higher Education Institutions affiliated to RTM Nagpur University provided they are approved by the competent authority of RTM Nagpur University. However, this needs to be informed by the student to the University thorough the college before the commencement of the semester and an application for transfer of credits is required to be made by student.
5.	**Skill Enhancement Course (SEC)**	A student is required to select a '**SKILL ENHANCEMENT COURSE**' from the basket provided by the university for this purpose. A separate notification and guidelines in this regard shall be displayed by the university on its website. **OR** A student can also earn credits for '**SKILL ENHANCEMENT COURSE**' by successfully completing online courses of equivalent credits from SWAYAM/NPTEL learning platforms or from other Higher Education Institutions affiliated to RTM Nagpur University provided they are approved by the competent authority of RTM Nagpur University or the courses from 'Sector Skill Council.' However, this need to be informedby student to the University through the college before the commencement of the semester and an application for transfer of credits is required to be made by 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. The list of the IKS courses (**subject-wise**) will be published by the University for this purpose. This course must be corresponding to the 'MAJOR.
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**' from amongst the basket provided under the direction/regulation governing B. A. Program. This course must be completed at the college where the student has taken admission and transfer of credit is not permissible for this type of course.
10.	**Field Project (FP) /On 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 supervisor/mentor assigned by the college. This course must be corresponding to the '**MAJOR**.' This course must be completed at the college where the student has taken admission and transfer of credit is not permissible for this type of course.

4. Availability 'Major' and 'Intake Capacity'

All colleges affiliated to the University for offering B. A. Program in the Faculty of Humanities shall adhere to the following:

Table 3: LIST OF MAJOR SUBJECTS

AFFILIATED PROGRAM	SANCTIONED INTAKE	'MAJOR' TO BE OFFERED	CODE OF 'MAJOR'
Group A	As approved by the University	1. Marathi Literature 2. Hindi Literature 3. Sanskrit Literature 4. Pali&Prakrit Literature 5. English Literature 6. Urdu Literature 7. Persian Literature 8. Arabic Literature	MLT HLT SLT PPL ELT ULT PLT ALT
Group B	As approved by the University	9. English 10. Marathi 11. Hindi 12. Sanskrit	ENG MAR HIN SLT
Group C	As approved by the University	13. Ancient Indian History, Culture & Archaeology 14. History 15. Library & Information Science	AIH HIS LIS
Group D	As approved by the University	16. Economics 17. Mathematics 18. Statistics	ECO MAT STA
Group E	As approved by the University	19. Political Science 20. Philosophy 21. Public Administration	POL PHL PUB
Group F	As approved by the University	22. Home Economics 23. Geography 24. Psychology	HEC GEO PSY
Group G	As approved by the University	25. Drama 26. Military Science 27. Fashion Designing 28. Music 29. Fine Arts	DRM MSC FDE MUS FAT
Group H	As approved by the University	30. Sociology 31. Buddhist Studies 32. Dr Ambedkar Thought 33. Gandhian Thought	SOC BST ATH GTH
NOTES: • Total intake capacity for the program as approved by the university shall remain the same and be divided amongst the '**Major**' subjects allowed for that program. • The college may offer a particular '**Major**' subject based on the availability of teachers and students. • The college is not expected to force any student to opt for a particular subject where a choice is provided in the scheme of examination. • Subject code given in the table may change, however the change if any will be notified.			

5. Minor Subjects:

All colleges affiliated to the University for offering B. A. Program may offer **MINOR** subject from any one group given in Table No. 3 Clause 4 except the subject in the group of '**MAJOR'** subjects. It is mandatory for the students to choose only one '**MINOR**' subject which obviously will be other than the **MAJOR** subject or Group of **MAJOR** s/he has already chosen. Once the **MINOR** subject is chosen from the particular group, it is mandatory for the student to pursue all the subjects from the group of that **MINOR**throughout the program(all semesters).**For Example**- A student is opting Economic as Minor subject from Group C will not be eligible to take the Minor subject from the other Groups.

6. All colleges affiliated to the University offering B. A. Program are required to put up a list of offering '**Major**' and '**Minor**' subjects on the Notice Board as well as on the website of the college to make students aware about the availability of subjects. Moreover, colleges are expected to define and display the 'Standard Operating Procedures' for their staff members and students to facilitate the process of selecting '**Major**' and '**Minor**' subjects.

7. In pursuance with the National Education Policy 2020 and a Government Resolution No. NEP-2020/प्र.क्र.09/विशी-3/शिकाना dated 20th April 2023 issued by the Government of Maharashtra, the credit framework and Teaching and Examination scheme for B. A. Program shall be as mentioned in **Annexure – I.**

Teaching and Examination Scheme

A teaching and examination scheme for students admitted to the B. A. Program shall be as follows:

Bachelor of Arts (B.A.) (NON- PRACTICAL COURSES)

B.A. – Semester I

Sr. No.	Course Type	Subjects	Course Code	Teaching Scheme			Examination Scheme					Credits C
				Total HoursPer Week			Max. Marks (TH) *	Max Marks Activity	Max. Marks (CIE)	Total Marks	Min. Passing Marks	
				Theory	Activity	Total						
1.	Major	As per basket **Major T-1**		4	-	4	80	-	20	100	40	4
	Major	**Major T-2**		2	-	2	40	-	10	50	20	2
2.	OE	To be selected from common basket. **OE-1**		4	-	4	80	-	20	100	40	4
3.	VSC	Refer to VSC Basket **VSC-1**		-	4	4	-	50	50	100	50	2
4.	SEC	To be selected from common basket. **SEC-1**		-	4	4	-	50	50	100	50	2
5.	AEC	English-1 **AEC-1**		1	2	3	50	-	50	100	40	2
6.	VEC	Environmental Studies**VEC-1**		2	-	2	40	-	10	50	20	2
7.	IKS	Indian Knowledge System		2	-	2	40	-	10	50	20	2
8.	CC	To be selected from common basket **CC-1**		-	4	4	-	50	50	100	50	2
		TOTAL		**15**	**14**	**29**	**380**	**150**	**270**	**750**	**330**	**22**

Note: Semester end examinationsubjects in Sr. No. 1,2,3,&6 will be conducted by the University.

B.A. – Semester – II

Sr. No.	Course Type	Subjects	Course Code	Teaching Scheme			Examination Scheme					Credits C
				Total Hours per Week			Max. Marks (TH) *	Max Marks Activity	Max. Marks (CIE)	Total Marks	Min. Passing Marks	
				Theory	Activity	Total						
1.	Major	As per Basket **Major T-3**		4	-	4	80	-	20	100	40	4
	Major	As per Basket **Major T-4**		2	-	2	40	-	10	50	20	2
2.	Minor	As per the Basket **Minor T-1**		2	-	2	40	-	10	50	20	2
3.	OE	To be selected from common basket. **OE-2**		4	-	4	80	-	20	100	40	4
4.	VSC	Refer to VSC basket **VSC-2**		-	4	4	-	50	50	100	50	2
5.	SEC	To be selected from common basket **SEC- 2**		-	4	4	-	50	50	100	50	2
6.	AEC	Modern Indian Language. **AEC- 2**		1	2	3	50	-	50	100	40	2
7.	VEC	To be selected from common basket. **VEC-2**		2	-	2	40	-	10	50	20	2
8.	CC	To be selected from common basket. **CC-2**		-	4	4	-	50	50	100	50	2
		TOTAL		**15**	**14**	**29**	**330**	**150**	**270**	**750**	**330**	**22**

Note: Semester end examinationfor subject in Sr. No. 1, 2,3,& 6 will be conducted by the University.

B.A. – Semester – III

Sr. No.	Course Type	Subjects	Course Code	Teaching Scheme			Examination Scheme					Credits C
				Total Hours per week			Max. Marks (TH) *	Max Marks Activity	Max. Marks (CIE)	Total Marks	Min. Passing Marks	
				Theory	Activity	Total						
1.	Major	As per basket**Major T-5**		4	-	4	80	-	20	100	40	4
	Major	As per Basket **Major T-6**		2	-	4	40	-	10	50	20	2

2.	Minor	As per basket **Minor T-2**		4	-	4	80	-	20	100	40	4
3.	OE	To be selected from common basket**OE- 3**		2	-	2	40	-	10	50	20	2
4.	VSC	Refer to VSC basket **VSC- 3**		-	4	4	-	50	50	100	50	2
5.	AEC	Modern Language **AEC- 3**		1	2	3	50	-	50	100	40	2
6.	FP	Field Project **EP**		-	4	4	-	100	-	100	50	2
7.	CC	To be selected from common basket**CC-3**		-	4	4	-	50	50	100	50	2
		TOTAL		**13**	**14**	**29**	**290**	**200**	**210**	**700**	**310**	**20**

Note: Semester end examination for subjects in Sr. No. 1,2,3 & 6 will be conducted by the University.

B.A. – Semester – IV

Sr. No.	Course Type	Subjects	Course Code	Teaching Scheme				Examination Scheme				Credits C
				Total Hours per week			Max. Marks (TH) *	Max Marks Activity	Max. Marks (CIE)	Total Marks	Min. Passing Marks	
				Theory	Activity	Total						
1.	Major	As per basket **Major T-7**		4	-	4	80	-	20	100	40	4
	Major	As per basket **Major T-8**		2	-	2	40	-	10	50	20	2
2.	Minor	As per basket **Minor T-3**		4	-	4	80	-	20	100	40	4
3.	OE	To be selected from common basket **OE-4**		2	-	2	40	-	10	50	20	2
4.	SEC	To be selected from common basket **SEC-3**		-	4	4	-	50	50	100	50	2
5.	AEC	English-II **AEC-4**		1	2	3	50	-	50	100	50	2
6.	CEP	Community Engagement Project **CEP-1**		-	4	4	-	50	50	100	50	2
7.	CC	To be selected from common basket **CC-4**		-	4	4	-	50	50	100	50	2
		TOTAL		**13**	**14**	**27**	**240**	**200**	**260**	**700**	**320**	**20**

Note: Semester end examination for subjects in Sr. No. 1,2,3,4 & 6 will be conducted by the University.

B.A. – Semester – V

Sr. No.	Course Type	Subjects	Course Code	Teaching Scheme			Examination Scheme					Credits C
				Total Hours per week			Max. Marks (TH) *	Max Marks Activity	Max. Marks (CIE)	Total Marks	Min. Passing Marks	
				Theory	Activity	Total						
1.	Major Major	As per basket **Major T-9**		4	-	4	80	-	20	100	40	4
		As per basket**Major T-10**		4	-	4	80	-	20	100	40	4
2.	Major Elective	As per basket **ME- 1**		4	-	4	80	-	20	100	40	4
3.	Minor	As per basket **Minor T-4**		4	-	4	80	-	20	100	40	4
4.	VSC	Refer to VSC basket. **VSC-4**		-	4	4	-	40	10	50	20	2
5.	FP/CEP	Community Engagement Programme **FP/CEP-2**		-	4	4	-	40	10	50	20	2
		TOTAL		**16**	**08**	**24**	**320**	**80**	**100**	**500**	**200**	**20**

Note: Semester end examination for subjects in Sr. No. 1,2,& 3 will be conducted by the University.

B.A. – Semester – VI

Sr. No.	Course Type	Subjects	Course Code	Teaching Scheme			Examination Scheme					Credits C
				Total Hours per week			Max. Marks (TH) *	Max Marks Activity	Max. Marks (CIE)	Total Marks	Min. Passing Marks	
				Theory	Activity	Total						
1.	Major	As per basket **Major T-8**		4	-	4	80	-	20	100	40	4
2.	Major	As per basket **Major T-9**		4	-	4	80	-	20	100	40	4
3.	Major Elective	As per basket **ME-2**		4	-	4	80	-	20	100	40	4
4.	Minor	As per basket **Minor T 5**		4	-	4	80	-	20	100	40	4
5.	OJT	On Job Training **OJT-1**		-	8	8	-	100	-	100	50	4
		TOTAL		**16**	**8**	**24**	**320**	**100**	**80**	**500**	**210**	**20**

Note: Semester end examination for subjects in Sr. No. 1,2,3, & 4 will be conducted by the University.

B. A. Semester – VII (Honours Degree)

Sr. No.	Course Type	Subjects	Course Code	Teaching Scheme			Examination Scheme					Credits C
				Total Hours per week			Max. Marks (TH) *	Max Marks Activity	Max. Marks (CIE)	Total Marks	Min. Passing Marks	
				Theory	Activity	Total						
1.	Major	As per basket**Major T-10**		4	-	4	80	-	20	100	40	4
	Major	As per basket**Major-T-11**		4	-	4	80	-	20	100	40	4
	Major	As per basket**Major-T12**		4	-	4	80	-	20	100	40	4
4.	Major Elective	As per basket **ME-3**		4	-	4	80	-	20	100	40	4
5.	Minor	Research Methodology **RM-1**		4	-	4	80	-	20	100	40	4
		TOTAL		**20**	**-**	**20**	**400**	**-**	**100**	**500**	**200**	**20**

Note: Semester end examination for all the five subjects will be conducted by the University.

B. A. Semester – VIII (Honours Degree)

Sr. No.	Course Type	Subjects	Course Code	Teaching Scheme			Examination Scheme					Credits C
				Total Hours per week			Max. Marks (TH) *	Max Marks Activity	Max. Marks (CIE)	Total Marks	Min. Passing Marks	
				Theory	Activity	Total						
1.	Major	As per basket**Major-13**		4	-	4	80	-	20	100	40	4
	Major	As per basket**Major-14**		4	-	4	80	-	20	100	40	4
	Major	As per basket**Major-15**		4	-	4	80	-	20	100	40	4
2.	Major Elective	As per basket **ME-4**		4	-	4	80	-	20	100	40	4
3.	OJT	On Job Training **OJT-2**		-	4	4	-	100	-	100	50	4
		TOTAL		**16**	**4**	**20**	**320**	**100**	**80**	**500**	**210**	**20**

Note: Semester end examination for subjects in Sr. No. 1, 2, 3, & 4 will be conducted by the University

B. A. Semester – VII (Research Degree)

Sr. No.	Course Type	Subjects	Course Code	Teaching Scheme			Examination Scheme					Credits C
				Total Hours per week			Max. Marks (TH) *	Max Marks Activity	Max. Marks (CIE)	Total Marks	Min. Passing Marks	
				Theory	Activity	Total						
1.	Major	As per basket**Major T-10**		4	-	4	80	-	20	100	40	4
	Major	As per basket**Major T-11**		4	-	4	80	-	20	100	40	4
2.	Major Elective	As per basket **ME-5**		4	-	4	80	-	20	100	40	4
3.	Minor	Research Methodology **RM**		4	-	4	80	-	20	100	40	4
4.	RP	Research Project **RP-1**		-	4	4	-	50	50	100	50	4
		TOTAL		**16**	**4**	**20**	**320**	**50**	**130**	**500**	**210**	**20**

Note: Semester end examination for subjects in Sr. No. 1,2,3, & 4 will be conducted by the University.

B. A. Semester – VIII (Research Degree)

Sr. No.	Course Type	Subjects	Course Code	Teaching Scheme			Examination Scheme					Credits C
				Total Hours per week			Max. Marks (TH) *	Max Marks (PR)	Max. Marks (CIE)	Total Marks	Min. Passing Marks	
				Theory	Activity	Total						
1.	Major	As per basket**Major-12**		4	-	4	80	-	20	100	40	4
	Major	As per basket**Major-13**		4	-	4	80	-	20	100	40	4
2.	Major Elective	As per basket **ME-5**		4	-	4	80	-	20	100	40	4
3.	RP	Research Project**RP-2**		-	8	8	-	100	100	200	100	8
		TOTAL		**12**	**08**	**20**	**240**	**100**	**160**	**500**	**220**	**20**

Note: Semester end examination for subjects in Sr. No. 1, 2, & 3, will be conducted by the University.

8. **Bachelor of Arts (B.A.) Practical Subjects: Teaching and Examination scheme of Practical Subjects will be provided separately as Annexure.**
   1. **Geography**
   2. **Psychology**
   3. **Social Work**
   4. **Music**
   5. **Fine Arts etc.**

9. **Grade Conversion Table and Computation of SGPA and CGPA**

Grade Conversion Table (Theory)

Mark Range	Grade Point	Letter Grade	Performance	Grade Point (G)
Upto90 – 100	9.00 - 10.00	O	Outstanding	10
Above 80 - < 90	8.00 - < 9.00	A+	Excellent	9
Above70 - < 80	7.00 - < 8.00	A	Very Good	8
Above 60 - < 70	6.00 - < 7.00	B+	Good	7
Above 50- < 60	5.50 - < 6.00	B	Above Average	6
Above 45- < 50	5.00 - < 5.50	C	Average	5
Above 40 - < 45	4.00 - < 5.00	P	Pass	4
Below 40	Below 4	AB	Fail	0
	0	-	Absent	0

Grade Conversion Table (Practical)

Mark Range	Grade Point	Letter Grade	Performance	Grade Point (G)
Above 90 - 100	9.00 - 10.00	O	Outstanding	10
Above 80 - < 90	8.00 - < 9.00	A+	Excellent	9
Above 70 - < 80	7.00 - < 8.00	A	Very Good	8
Above 60 - < 70	6.00 - < 7.00	B+	Good	7
Above 55 - < 60	5.50 - < 6.00	B	Above Average	6
Above 50 - < 55	5.00 - < 5.50	P	Pass	5
Below 50	Below 5	F	Fail	0
-	0	AB	Absent	0

Computation of SGPA & CGPA:

a. The SGPA is the ratio of sum of the product of the number of credits with the gradepoints scored by a student (in all the courses taken by a student) and the sum of thenumber of credits of all courses undergone by a student, i.e in that semester.

SGPA (Si) = $\Sigma(C_i \times G_i) / \Sigma C_i$

WhereC_i is the number of credits of the i^{th} course and
G_i is the grade point scored by thestudent in the i^{th} course.

Illustration for SGPA

Course	Credit	Grade Letter	Grade Point	Credit Point (Credit X Grade)
Course 1	3	A	8	3x8=24
Course 2	4	B+	7	4x7=28
Course 3	3	B	6	3x6=18
Course 4	3	O	10	3x10=30
Course 5	3	C	0	3x0=0
Course 6	4	B	6	4x6=24
	20			124

Thus, SGPA=124/20=6.20

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

CGPA = $\Sigma(C_i x S_i) / \Sigma C_i$

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

Illustration for CGPA

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6
Credit 20 SGPA:6.9	Credit:22 SGPA:7.8	Credit:25 SGPA:5.6	Credit:26 SGPA:6.0	Credit:26 SGPA:6.3	Credit:25 SGPA:8.0

Thus, CGPA=$\frac{20x6.9+22x7.8+25x5.6+26x6.0+26x6.3+25x8.0}{144}$=6.73

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

d. **CGPA to Percentage (%) conversion formula:**

Percentage (%) = (CGPA) * 10

10. General Guidelines:

a. Student opting Major from any of the one group (from Group A to Group G) cannot take Minor from the same group. For Example: - A student is opting History as Major from Group B will not be eligible to take the Minor subject from the same Group B. He can opt any other subject as Minor available in other Groups except from Group B.
b. A student will be eligible to the fourth year of four year with Research Degree only when she/he scores minimum 7.5 CGPA or 75% in three-year degree.
c. 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.
d. The baskets of Elective & Vocational Skill Courses are related to the Major, will be given as annexure.
e. The baskets of Open Elective Courses, Skill Enhancement Courses and Minor Courses being common will be published separately inAnnexure.

11. Credit Specifications:

a. Theory/Tutorial Courses**:** One hour per week will be counted as one credit. A minimum of 15 hours of teaching per credit is required in a semester.
b. Laboratory/Performance Based Courses: For one credit a minimum of 30 hours in laboratory or Performance Based activities is required in a semester of the week. Performance based activities include Studio activities, Workshop based activities, internship, Apprenticeship, 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

a. The final total assessment of examinees is made in terms of Continuous Internal Assessment (CIE) andSession End Examination (SEE) for each course/subject taken together.
b. For each subject mentioned in 10(d) & (e) will be given in the form of Annexure. The examination shall be conducted at college level (Odd semestersexaminations) and RTM Nagpur University level (Even semester examinations).
c. The examination shall be conducted as prescribed above and evaluation system will be prescribed separately by the University.

d. Expected classroom activities shall consist of the following: (a) Group Discussion (b) Seminars (c) Power Point Presentations (d) Elocution (e) Debate (f) Role Play (g) Presentation of Case Studies (h) Educational Games (i)Subject Quiz. The teacher is expected to undertake a minimum of four of the aforesaid activity.

Continuous Internal Assessment (for 20:80 Scheme subject)

1a	Attendance of the student during a particular semester	05 Marks
1b	An assignment based on curriculum to be assessed by the teacher concerned	05 Marks
1c	Subject wise class test or activities conducted by the teacher concerned	10Marks
1	**Continuous Internal Evaluation Total marks**	**20**

e. In case of Courses having more than 20 marks for CIE, a scheme of evaluation is published with the details.
f. The CIE marks will be communicated to the University at the end of each semester, but before the semester end examinations / as instructed by the University. These marks will be considered for the declaration of the results.
g. The record of CIE marks, evaluation &results should be maintained for a period of one year by the respective institute/college for verification by the competent authority.

13. Standard of Passing

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

(i) In order to pass the Bachelor of Arts (B.A.) 1st, 2nd, 3rd, 4th, 5th, 6th, 7th and 8thSemester Examinations, an examinee shall obtain not less than 40 % (Grade Point 4) marks in each theory course/paper, taking CIE & SEE together. Whereas, for practical/performance-based examination an examinee shall obtain not less than 50 % (Grade Point 5) 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 fresh fee prescribed for the examination together with the conditions for admission to higher semester as per the ordinance in force from time to time.

14. Abbreviations Used:

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

15. Provision for Transfer of Credits

The B.A program offered under this direction provides enhanced academic flexibility to students in terms of selecting the courses they want to learn. A student can opt for any course from any statutory/recognized University or a MOOC from SWAYAM/NPTEL in lieu of a course mentioned in this scheme of examination as 'Open Elective', 'Vocational Skill Course' and 'Skill Enhancement Course'. The mechanism for transfer of credits earned through these courses to be adhered is mentioned here:

1. Every student is mandatorily required to create an ID on Academic Bank of Credits (ABC) and shall submit her/his ID to the college.
2. Any subject mentioned in this scheme of examination under 'Open Elective', 'Vocational Skill Course', and 'Skill Enhancement Course' can be opted out by a student for taking a MOOC from SWAYAM/NPTEL learning platform.
3. If a student is willing to opt out any such course, he/she will have to mention this while submitting the examination form to the University for respective semester.
4. A certificate of completion of such an ODL/Online course shall be submitted by the student to the University through college before end term evaluation.
5. Such a certificate shall mandatorily have the number of credits, duration of the course and grades/marks obtained by the student and shall preferably have a QR code for verification.
6. The college shall submit the grades and marks obtained by the student to the University along with Internal Assessment marks for the concerned examination.
7. If a student has opted for an ODL/Online course in a particular semester and failed to submit the certificate within prescribed time, the student will be marked as 'Absent' for a particular subject in that examination. Such a student will be required to fill in the examination form in the consecutive attempt and submit the passing certificate in order to get his/her corrected result.
8. A separate guideline 'Transfer of Credits' issued by the University will be applicable to the students of B. A. Program from the date of its issuance.

NOTE: This scheme of teaching and examination for Four Year Bachelor of Arts (Honours/Research) program shall be effective from the academic session 2023-24 and a comprehensive direction for other regulations in this connection shall be soon issued by the University.

Four Year Bachelor of Science & BCA Examination

Scheme of Examination for Four Year Bachelor of Science (B.Sc.) & BCA Program from Academic Session 2023-24

As approved by all the Boards of Studies in the Faculty of Science & Technology in their meetings held on 20th May 2023

Placed before the Faculty of Science & Technology for consideration and approval in its meeting scheduled on 25th May 2023

Preamble:

The Academic Council of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur has adopted the Government Resolution No. NEP-2020/प्र.क्र.09/विशी-3/शिकाना dated 20th April 2023 issued by the Government of Maharashtra in its meeting held on 21st April 2023 in view of implementation of National Education Policy, 2020. The Faculty of Science & Technology, R T M Nagpur University has approved the following 'Teaching and Examination Scheme' for 'Four Year – Bachelor of Science (B.Sc.) Honours/Research Degree with Major and Minor' in its meeting held on 25th May 2023. The scheme is also approved by the Academic Council of the University in its meeting held on 5th June 2023. This notification is issued to facilitate the HEIs (Affiliated Colleges) and students for smooth conduct of admission process for the year 2023-24. Basic details required at the time of admission are provided in this notification and a detailed Direction/Regulation containing comprehensive provisions related to all aspects shall soon be issued by the University. Further, a list of 'Co-Curricular Courses (Annexure – VI) shall also be soon issued by the University.

1. Details of Eligibility for B.Sc. & BCA Semester I Examination

a. The candidate should have passed 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;

OR

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).

OR

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.

d. For admission to the B.Sc. programs in i) Computer Science ii) Information Technology, iii) Data Science iv) Electronics and v) Bachelor in Computer Applications (BCA), the candidate should have passed the 12th Standard Examination of the Maharashtra State Board of Secondary and Higher Secondary Education with English and other Modern Indian Languages together with mathematics or an examination recognized as equivalent thereto in such subjects and with such standards of attainments as may be prescribed.

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

Duration of the **B.Sc. & BCA** Program 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 even semester as per their future career needs:

a. A student can exit the program after successful completion of semesters I & II having earned 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 'Certificate in Science' by the University.
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 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 'Diploma in Science' by the University.
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 requisite number of credits as mentioned in the scheme of examination. Such a student shall be eligible for the award of 'Three Year Bachelor of Science' degree by the University.
OR a student can continue the program in 4th year for either HONOURS or RESEARCH degree.

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

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

Levels	Qualification Title	Additional Credits to be Earned	Credit Earned	Sem.	Year
4.5	UG Certificate in Science *OR* Continue with Major	4 (NSQF* Course or Internship)	44	2	1
5.0	UG Diploma in Science with Major & Minor *OR* Continue with Major	4 (NSQF* Course or Internship)	88	4	2
5.5	Three Year Bachelor Degree in Science with Major & Minor *OR* Continue with Major & Minor	Not Required	132	6	3
6.0	Bachelor Degree in Science (Honors/Research) with Major and Minor	Not Required	172	8	4

***NSQF:** National Skill Qualification Framework or the skill courses prescribed by the RTMNU.*

3. Re-entry or Lateral Entry

a. Students, opting for exit at any level, will have the option to re-enter the programme from where they had left off, in the same or in a different higher education institution within THREE years of exit and complete the degree programme within the stipulated maximum period of SEVEN years from the date of admission to 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 Honours/Research will be based on the validation of prior learning outcomes achieved and subject to availability of seats based on intake capacity.

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

SN	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 the examination form for 1st Semester. Change of major subject shall not be permitted after the examination form is submitted. Major subject comprises of Mandatory and Elective Course.
2.	Minor Subject	A student is required to select her/his 'MINOR' subject from amongst the choices provided in this scheme of examination or any other degree program offered by the university in any other faculty before filling the examination form for 3rd Semester. Change of minor subject shall not be permitted after the examination form for 3rd Semester is submitted.
3.	Open Elective Course (OE)	A student is required to select an 'OPEN ELECTIVE' from the 'Open Elective Basket' of any program offered by the university in any faculty before filling 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 online courses of equivalent credits from SWAYAM/NPTEL learning platforms or from other Higher Education Institutions affiliated to RTM Nagpur University. However, this needs to be informed by student to the college before commencement of the semester and an application for transfer of credits is required to be made by student.
4.	Vocational Skill Course (VSC)	A student is required to successfully complete the 'VOCATIONAL SKILL COURSE' as mentioned in this scheme of examination. 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 'VOCATIONAL SKILL COURSE' by successfully completing online courses of equivalent credits from SWAYAM/NPTEL learning platforms or from other Higher Education Institutions affiliated to RTM Nagpur University provided they are approved by the competent authority of RTM Nagpur University. However, this needs to be informed by student to the college before commencement of the semester and an application for transfer of credits is required to be made by student.
5.	Skill Enhancement Course (SEC)	A student is required to select a 'SKILL ENHANCEMENT COURSE' from the basket provided by the university for this purpose. A separate notification and guidelines in this regard shall be displayed by the university on its website. A student is allowed to earn credits for 'SKILL ENHANCEMENT COURSE' by successfully completing online courses of equivalent credits from

		SWAYAM/NPTEL learning platforms or from other Higher Education Institutions affiliated to RTM Nagpur University provided they are approved by the competent authority of RTM Nagpur University or the courses from Sector Skill Council. However, this needs to be informed by student to the college before commencement of the semester and an application for transfer of credits is required to be made by 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. This course must be completed at the Higher Education Institute (HEI) where the student has taken admission and 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 supervisor/mentor assigned by the HEI. This course must be corresponding to the 'MAJOR.' This course must be completed at the HEI where the student has taken admission and transfer of credit is not permissible for this type of course.

5. Availability of 'Major' and 'Intake Capacity'

All HEIs affiliated to the University for offering B. Sc. Program in the Faculty of Science and Technology shall adhere to the following:

Table 3: List of MAJOR Subjects

Affiliated Program	**Sanctioned Intake**	**'Major' to be offered**	**Code of 'Major'**
B. Sc. (Group A)	As approved by the University	Chemistry	CH
		Environmental Science	ES
		Textile Science	TS
		Fashion Design	FD
B. Sc. (Group B)	As approved by the University	Physics	PH
		Zoology	ZO
		Biochemistry	BC
		Cosmetic Tech.	CT
B. Sc. (Group C)	As approved by the University	Mathematics	MT
		Botany	BO
		Home Science	HS
		Forensic Science	FS
		Interior Design	HD
B. Sc. (Group D)	As approved by the University	Statistics	ST
		Microbiology	MI
		Biotechnology	BT
		Geology	GE
		Electronics	EN

B. Sc. (Group E)	As approved by the University	Computer Science	CS
		Data Science	DS
		Information Technology	IT
		Bachelor of Computer Application	CA
		App. Electronics & Software Technology	ET

NOTES:

- Table 3 above has five groups accommodating all the Major programs. A student is required to select one Major program (subject) from any Basket.
- A student is required to select one Minor from any basket except the basket from which she/he has selected the Major program (subject).
- Total intake capacity for the program as approved by the university shall remain the same and be divided amongst the 'Major' subjects allowed for that program.
- The HEI may offer a particular 'Major' subject based on the availability of teachers and students.
- The HEI is not expected to force any student to opt for a particular subject where a choice is provided in the scheme of examination.
- Subject code given in the table may change, however the change if any will be notified.

6. Minor Subjects:

All HEIs affiliated to the University for offering B. Sc. Program may offer all/any of the subjects given in Table 3 (column 3) as 'MINOR' subject/s as mentioned in this scheme of examination. 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, it is mandatory for a student to pursue all the courses from the basket of that Minor only.

7. All HEIs affiliated to the University offering B. Sc. Program are required to display the list of 'Major' and 'Minor' subjects offered on the Notice Board as well as on the website of HEI to make students aware about the availability of subjects. Moreover, HEIs are expected to define and display the 'Standard Operating Procedure' for their faculty members and students to facilitate the process of selecting 'Major' and 'Minor' subjects.

8. In pursuance with the National Education Policy 2020 and a Government Resolution No. NEP-2020/प्र.क्र.09/विशी-3/शिकाना dated 20th April 2023 issued by the Government of Maharashtra, the credit framework for B. Sc. Program is given in **Annexure - I.**

9. Teaching and Examination Schemes:

Teaching and Examination Schemes (of eight semesters) and Syllabus of Semester I & II for all B.Sc. subjects and BCA is appended in **Annexure - II**.

10. 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 Studio activities, Workshop based activities, internship, Apprenticeship, 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.

11. GRADE Conversion Table and Computation of SGPA & CGPA

Table 4: Grade Conversion Table (Theory)

SN	Letter Grade	Grade Point	Mark Range	Performance
1	O	9.00 - 10.00	90 - 100	Outstanding
2	A+	8.00 - < 9.00	80 - < 90	Excellent
3	A	7.00 - < 8.00	70 - < 80	Very Good
4	B+	6.00 - < 7.00	60 - < 70	Good
5	B	5.50 - < 6.00	55 - < 60	Above Average
6	C	5.00 - < 5.50	50 - < 55	Average
7	P	4.00 - < 5.00	40 - < 50	Pass
8	F	Below 4	Below 40	Fail
9	AB	0	-	Absent

Table 5: Grade Conversion Table (Practical)

SN	Letter Grade	Grade Point	Mark Range	Performance
1	O	9.00 - 10.00	90 - 100	Outstanding
2	A+	8.00 - < 9.00	80 - < 90	Excellent
3	A	7.00 - < 8.00	70 - < 80	Very Good
4	B+	6.00 - < 7.00	60 - < 70	Good
5	B	5.50 - < 6.00	55 - < 60	Above Average
6	P	5.00 - < 5.50	50 - < 55	Pass
7	F	Below 5	Below 50	Fail
8	AB	0	-	Absent

Computation of SGPA & CGPA:

The UGC recommends the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

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

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

where Ci is the number of credits of the ith course and Gi 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 programme, i.e.

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

where Si is the SGPA of the ith semester and Ci 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:

$$Percentage\ (\%) = (CGPA) * 10$$

Note: Illustration for Computation of SGPA & CGPA is given on last page

12. General Guidelines:

a. Students opting Major in the subjects Computer Application, Computer Science, Information Technology and Data Science will not be eligible to take Minor Courses offered by any of these four Major subjects. For Example, a student is opting Computer Application as Major, will not be eligible to take the Minor courses from the Minor baskets of Computer Science, Information Technology and Data Science subjects.

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

c. 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.

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

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

f. SEE (Semester End Examination) for Theory as well as Practical examinations as mentioned in the scheme shall be conducted by the University for all EVEN semesters and by colleges on behalf of the University for all ODD Semesters.

g. In case, a student is opting out any of the course (subject to conditions of this scheme) and bringing credits from any other institutes/online courses outside the scheme, the marks/grades obtained by student shall be certified by the Principal and be submitted to the university as CIE (Continuous Internal Examination) marks.

13. Assessment

- The final total assessment of examinees is made in terms of Continuous Internal Assessment (CIE) and Session End Examination (SEE) for each course/subject taken together.
- For each course mentioned in Annexures – II, III, IV and V, the examination shall be conducted at college level (Odd semesters examinations) and RTM Nagpur University level (Even semester examinations)
- For each course mentioned in annexure - VI, the examination shall be conducted at the college level according to the evaluation system prescribed in annexure – VI.

Table 6: CIE Assessment Plan

1a	Attendance of the student during a particular semester	05 Marks
1b	An assignment (min. two) based on curriculum to be assessed by the teacher concerned	05 Marks
1c	Subject wise class test (min. two) or activities conducted by the teacher concerned with proper rubrics.	10 Marks
	Continuous Internal Evaluation (CIE) marks/course	**20**

- In case of Courses having more than 20 marks for CIE, a scheme of evaluation is appended with the detailed syllabus of the course.
- Expected classroom activities shall consist of the following: (a) Group Discussion (b) Seminars (c) Power Point Presentations (d) Elocution (e) Debate (f) Role Play (g) Case Studies (h) Educational Games. The teacher is expected to undertake a minimum of four of the aforesaid activity.
- The CIE marks will be communicated to the University at the end of each semester, but before the semester end examinations / as instructed by the university. These marks will be considered for the declaration of the results.
- The record of internal marks, evaluation & results should be maintained for a min. period of three year by the respective institute/college for verification by the competent authority.

14. Standard of Passing

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

(i) In order 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 examination an examinee shall obtain not less than 50 % (Grade 5) 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.

15. Abbreviations Used:

CIE: Continuous Internal Evaluation SEE: Semester End Examination

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

16. Provision for Transfer of Credits

The B.Sc. program offered under this direction provides enhanced academic flexibility to students in terms of selecting the courses they want to learn. A student can opt for any course from any statutory/recognized University or a MOOC from SWAYAM/NPTEL in lieu of a course mentioned in this scheme of examination as 'Open Elective', 'Vocational Skill Course' and 'Skill Enhancement Course'. The mechanism for transfer of credits earned through these courses to be adhered is mentioned here:

1. Every student is mandatorily required to create an ID on Academic Bank of Credits (ABC) and shall submits her/his ID to the college.
2. Any Course mentioned in this scheme of examination under 'Open Elective', 'Vocational Skill Course', and 'Skill Enhancement Course' may be opted by a student for taking a MOOC from SWAYAM/NPTEL learning platform.
3. A student cannot opt any other course than the courses under course category mentioned in point no. 2 mentioned above.
4. If a student is willing to opt any such course, he/she will have to mention this while submitting the examination form to the University for respective semester.
5. A certificate of completion of such an ODL/Online course shall be submitted by the student to the University through college before end term evaluation.
6. Such a certificate shall mandatorily have the number of credits, duration of the course and grades/marks obtained by the student and shall preferably have a QR code for verification.
7. The college shall submit the grades and marks obtained by the student to the University along with CIE marks for the concerned examination.
8. If a student has opted for an ODL/Online course in a particular semester and failed to submit the certificate within prescribed time, the student will be marked as 'Absent' for a particular course in that examination. Such a student will be required to fill in the examination form for the next attempt and submit the passing certificate in order to get his/her corrected result.
9. A separate guideline 'Transfer of Credits' issued by the University will be applicable to the students of B. Sc. Program from the date of its issuance.

Annexure – I: Credit Structure given by Govt. of Maharashtra as per GR dated 20/04/2023
Annexure – II: Scheme of teaching & examination of all Major programs
Annexure – III: Basket of Minor Courses of all programs
Annexure – IV: Basket of Open Electives (OE)
Annexure – V: Basket of Skill Enhancement Courses (SEC)
Annexure – VI: Basket of Co-curricular courses (CC)

NOTE: This scheme of teaching and examination for Bachelor of Science program shall be effective from the academic session 2023-24 and a comprehensive direction for other regulations in this connection shall be soon issued by the University.

Illustration for Computation of SGPA & CGPA

i) Illustration for SGPA

COURSE	CREDIT	GRADE LETTER	GRADE POINT	CREDIT POINT (Credit * Grade)
Course 1	3	A	8	3 * 8 = 24
Course 2	4	B+	7	4 * 7 = 28
Course 3	3	B	6	3 * 6 = 18
Course 4	3	O	10	3 * 10 = 30
Course 5	3	C	5	3 * 5 = 15
Course 6	4	B	6	4 * 6 = 24
	20			139

SGPA (Si) = Σ(Ci x Gi) / ΣCi

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

Thus, SGPA = 139 / 20 = 6.95

ii) Illustration for CGPA

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6
Credit : 20 SGPA : 6.9	Credit : 22 SGPA : 7.8	Credit : 25 SGPA : 5.6	Credit : 26 SGPA : 6.0	Credit : 26 SGPA : 6.3	Credit : 25 SGPA : 8.0

CGPA = Σ(Ci x Si) / Σ Ci

where Si is the SGPA of the ith semester and Ci is the total number of credits in that semester.

$$\text{Thus, CGPA} = \frac{20 \times 6.9 + 22 \times 7.8 + 25 \times 5.6 + 26 \times 6.0 + 26 \times 6.3 + 25 \times 8.0}{144} = 6.73$$

Annexure - I

Credit distribution structure for three/ four-year Honors/Research Degree Program with Multiple Entry and Exit options (GoM GR dated 20/04/2023)

Level	Sem.	Major		Minor	OE	VSC, SEC (VSEC)	AEC, VEC, IKS	OJT, FP, CEP, CC,RP	Cum. Cr./Sem.	Degree/ Cum. Cr.
		Mandatory	Electives							
4.5	I	6	-	-	2 + 2	VSC: 2, SEC: 2	AEC: 2, VEC: 2, IKS: 2	CC: 2	22	**UG Certificate 44**
	II	6	-	-	2 + 2	VSC: 2, SEC: 2	AEC: 2, VEC:2 IKS: 2	CC: 2	22	
	Cum Cr.	12	-	-	8	4 + 4 = 8	4 + 4+ 4 = 12	4	44	
Exit option: Award of UG Certificate in Major with 40-44 credits and an additional 4 credits core NSQF course/ Internship ORContinue with Major and Minor										
5.0	III	6		6	2	VSC:2,	AEC:2	FP:2 CC:2	22	**UG Diploma 88**
	IV	6		6	2	SEC:2	AEC:2	CEP: 2 CC:2	22	
	Cum Cr.	24		12	12	12	16	12	88	
Exit option; Award of UG Diploma in Major and Minor with 80-88 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor										
5.5	V	9	4	6	-	VSC: 2	-	CEP: 1	22	**UG Degree 132**
	VI	9	4	3	-	VSC: 2	-	OJT :4	22	
	Cum Cr.	42	8	21	12	16	16	17	132	
Exit option: Award of UG Degree in Major with 120-132 credits OR Continue with Major and Minor										
6.0	VII	12	4	RM:4	-	-	-	-	20	**UG Honours Degree 172**
	VIII	12	4	-	-	-	-	OJT: 4	20	
	Cum Cr.	66	16	25	12	16	16	21	172	
Four Year UG Honours Degree in Major and Minor with 160-176 credits										
6.0	VII	9	4	RM:4	-	-	-	RP: 3	20	**UG Research Degree 172**
	VIII	9	4	-	-	-	-	RP: 7	20	
	Cum Cr.	60	16	25	12	16	16	27	172	
Four Year UG Honours with Research Degree in Major and Minor with 160-176 credits										

Annexure - II

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur 440033

Scheme and Syllabus

Bachelor of Botany

Submitted by

Board of Studies,

Bachelor of Botany

FYUGP-Scheme I-VIII Semester

Bachelor of Science (Honors/Research)

(Botany- Major)

Four Year (Eight Semester Degree Course)

Teaching and Examination Scheme

B.Sc. Sem-I (Botany - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	**Botany-1** Microorganisms-Viruses, Prokaryotes, Algae and Fungi	BBO1T01	2	-	-	2	3	80	20	40	-	-	-
2	DSC	**Botany-1** Microorganisms-Viruses, Prokaryotes, Algae and Fungi	BBO1P01	-	-	2	1	-	-	-	-	25	25	25
3	DSC	**Botany-2** Cryptogams-Bryophyta, Palaeobotany & Pteridophyta	BBO1T02	2	-	-	2	3	80	20	40	-	-	-
4	DSC	**Botany-2** Cryptogams-Bryophyta, Palaeobotany & Pteridophyta	BBO1P02	-	-	2	1	-	-	-	-	-	50	25
5	GE/OE	Refer GE/OE Basket	BGO1T01	2	-	-	2	3	80	20	40	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO1T02	2	-	-	2	3	80	20	40	-	-	-
7	VSC	Identification of Angio spermic plants	BVS1P01	-	-	4	2	-	-	-	-	50	50	50
8	SEC	Refer SEC Basket	BVS1P02	-	-	4	2	-	-	-	-	50	50	50
9	AEC	English Compulsory	BAE1T01	2	-	-	2	3	50	50	40	-	-	-
10	VEC	Environmental Sci.	BVE1T01	2	-	-	2	3	80	20	40	-	-	-
11	IKS	Vedic Mathematics	BIK1T01	2	-	-	2	3	80	20	40	-	-	-
12	CC	Refer CC Basket	BCC1P01	-	-	4	2	-	-	-	-	-	100	50
Total				14	-	16	**22**		**530**	**170**		**150**	**250**	

B.Sc. Sem-II (Botany - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	**Botany-3** Spermatophyte-Gymnosperm & Angiosperm Morphology	BBO2T03	2	-	-	2	3	80	20	40	-	-	-
2	DSC	**Botany-3** Spermatophyte-Gymnosperm & Angiosperm Morphology	BBO2P03	-	-	2	1	-	-	-	-	25	25	25
3	DSC	**Botany-4** Cell Biology & Genetics (Mendelism)	BBO2T04	2	-	-	2	3	80	20	40	-	-	-
4	DSC	**Botany-4** Cell Biology & Genetics (Mendelism)	BBO2P04	-	-	2	1	-	-	-	-	-	50	25
5	GE/OE	Refer GE/OE Basket	BGO2T03	2	-	-	2	3	80	20	40	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO2T04	2	-	-	2	3	80	20	40	-	-	-
7	VSC	Horticulture	BVS2P03	-	-	4	2	-	-	-	-	50	50	50
8	SEC	Refer SEC Basket	BVS2P04	-	-	4	2	-	-	-	-	50	50	50
9	AEC	Second Language	BAE2T02	2	-	-	2	3	50	50	40	-	-	-
10	VEC	Constitution of India	BVE2T02	2	-	-	2	3	80	20	40	-	-	-
11	IKS	Indian Astronomy	BIK2T02	2	-	-	2	3	-	-	-	50	50	50
12	CC	Refer CC Basket	BCC2P02	-	-	4	2	-	-	-	-	-	100	50
Total				14	-	16	**22**		**530**	**170**		**150**	**250**	

Exit option: Award of UG Certificate in Major with 40-44 credits and an additional 4 credits core NSQF course/ Internship ORContinue with Major and Minor

B.Sc. Sem-III (Botany - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	**Botany-5** Algae, Fungi, Lichen &Plant Pathology	BBO3T05	2	-	-	2	3	80	20	40	-	-	-
2	DSC	**Botany-5** Algae, Fungi, Lichen &Plant Pathology	BBO3P05	-	-	2	1	-	-	-	-	25	25	25
3	DSC	**Botany-6** Fossil Angiosperms &Angiosperm Taxonomy	BBO3T06	2	-	-	2	3	80	20	40	-	-	-
4	DSC	**Botany-6** Fossil Angiosperms &Angiosperm Taxonomy	BBO3P06	-	-	2	1	-	-	-	-	-	50	25
5	Minor	Minor 1 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
6	Minor	Minor 1 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
7	Minor	Minor 2 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
8	Minor	Minor 2 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
9	GE/OE	Refer GE/OE Basket	BGO3T05	2	-	-	2	3	80	20	40	-	-	-
10	VSC	Refer VSC Basket	BVS3P05	-	-	4	2	-	-	-	-	50	50	50
11	AEC	Second Language	BAE3T03	2	-	-	2	3	50	50	40	-	-	-
12	FP	Field Project	BFP3P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC3P03	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	**22**		**450**	**150**		**200**	**300**	

B.Sc. Sem-IV (Botany - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	**Botany-7** Genetics, Plant breeding, Biostatistics & Evolution	BBO4T07	2	-	-	2	3	80	20	40	-	-	-
2	DSC	**Botany-7** Genetics, Plant breeding, Biostatistics & Evolution	BBO4P07			2	1	-	-	-	-	25	25	25
3	DSC	**Botany-8** Plant Development, Anatomy& Embryology	BBO4T08	2	-	-	2	3	80	20	40	-	-	-
4	DSC	**Botany-8** Plant Development, Anatomy& Embryology	BBO4P08			2	1	-	-	-	-	-	50	25
5	Minor	Minor 3 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
6	Minor	Minor 3 (Refer Minor Basket)				2	1	-	-	-	-	25	25	25
7	Minor	Minor 4 (Refer Minor Basket)		2	-		2	3	80	20	40	-	-	-
8	Minor	Minor 4 (Refer Minor Basket)				2	1	-	-	-	-	-	50	25
9	GE/OE	Refer GE/OE Basket	BGO4T06	2	-	-	2	3	80	20	40	-	-	-
10	SEC	Refer SEC Basket	BVS4P06	-	-	4	2	-	-	-	-	50	50	50
11	AEC	English Compulsory	BAE4T03	2	-	-	2	3	50	50	40	-	-	-
12	CEP	Community Service	BCM4P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC4P04	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	**22**		**450**	**150**		**200**	**300**	

Exit option; Award of UG Diploma in Major and Minor with 80-88 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor

B.Sc. Sem-V (Botany - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min	SEE	CIE	Min.
1	DSC	**Botany-9** Biochemistry & Plant Physiology	BBO5T09	2	-	-	2	3	80	20	40	-	-	-
2	DSC	**Botany-9** Biochemistry & Plant Physiology	BBO5P09	-	-	2	1	-	-	-	-	25	25	25
3	DSC	**Botany-10** Economic botany, Ethnobotany & Phytogeography.	BBO5T10	2	-	-	2	3	80	20	40	-	-	-
4	DSC	**Botany-10** Economic botany, Ethnobotany & Phytogeography.	BBO5P10	-	-	2	1	-	-	-	-	-	50	25
5	DSC	**Botany-11** Medicinal Plants: Cultivation and Practices	BBO5T11	2	-	-	2	3	80	20	40	-	-	-
6	DSC	**Botany-11** Medicinal Plants: Cultivation and Practices	BBO5P11	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective **1Botany 12** (Pharmacognosy and Phytochemistry / Forestry)	BBO5T12	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective **1Botany 12** (Pharmacognosy and Phytochemistry / Forestry)	BBO5P12	-	-	2	1	-	-	-	-	-	50	25
9	Minor	Minor 5 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 5 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
11	Minor	Minor 6 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
12	Minor	Minor 6 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
13	VSC	Refer VSC Basket	BVS5P07	-	-	4	2	-	-	-	-	50	50	50
14	CEP	Community Service	BCM5P02	-	-	2	1	-	-	-	-	25	25	25
Total				**13**	**-**	**18**	**22**	**-**	**520**	**130**	**--**	**225**	**225**	**-**

B.Sc. Sem-VI (Botany - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	**Botany-13** Ecology & Laboratory Instrumentation	BBO6T13	2	-	-	2	3	80	20	40	-	-	-
2	DSC	**Botany-13** Ecology & Laboratory Instrumentation	BBO6P13	-	-	2	1	-	-	-	-	25	25	25
3	DSC	**Botany-14** Biotechnology& Molecular Biology	BBO6T14	2	-	-	2	3	80	20	40	-	-	-
4	DSC	**Botany-14** Biotechnology& Molecular Biology	BBO6P14	-	-	2	1	-	-	-	-	-	50	25
5	DSC	**Botany-15** Seed Technology & Plant Nursery	BBO6T15	2	-	-	2	3	80	20	40	-	-	-
6	DSC	**Botany-15** Seed Technology & Plant Nursery	BBO6P15	-	-	2	1	-	-	-	-	25	25	25
7	DSE	**Elective-2 Botany 16** Molecular biology & Bioinformatics / LaboratoryTechniques	BBO6T16	3	-	-	3	3	120	30	60	-	-	-
8	DSE	**Elective-2 Botany 16** Molecular biology & Bioinformatics / LaboratoryTechniques	BBO6P16	-	-	2	1	-	-	-	-	-	50	25
9	Minor	Minor 7 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 7 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
11	VSC	Refer VSC Basket	BVS6P08	-	-	4	2	-	-	-	-	50	50	50
12	OJT	Internship (Related to DSC)	BOJ6P01	-	-	8	4	-	-	-	-	100	100	100
Total				11	-	22	**22**		**440**	**110**		**275**	**275**	

Exit option: Award of UG Degree in Major with 120-132 credits OR Continue with Major and Minor

B.Sc. Sem-VII (Honors) (Botany - Major)

S N	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	**Botany-17** Microbiology, Algae and Fungi	BBO7T17	2	-	-	2	3	80	20	40	-	-	-
2	DSC	**Botany-17** Microbiology, Algae and Fungi	BBO7P17	-	-	2	1	-	-	-	-	25	25	25
3	DSC	**Botany-18** Bryophytes and Pteridophytes	BBO7T18	2	-	-	2	3	80	20	40	-	-	-
4	DSC	**Botany-18** Bryophytes and Pteridophytes	BBO7P18	-	-	2	1	-	-	-	-	-	50	25
5	DSC	**Botany-** 19 Palaeobotany and Gymnosperms	BBO7T19	2	-	-	2	3	80	20	40	-	-	-
6	DSC	**Botany-** 19 Palaeobotany and Gymnosperms	BBO7P19	-	-	2	1	-	-	-	-	25	25	25
7	DSC	**Botany-20** Cytology and Genetics	BBO7T20	2	-	-	2	3	80	20	40	-	-	-
8	DSC	**Botany-20** Cytology and Genetics	BBO7P20	-	-	2	1	-	-	-	-	-	50	25
9	DSE	Elective 3 **Botany 21** (Plant Identification & Herbarium Technique / Ethnobotany)	BBO7T21	3	-	-	3	3	120	30	60	-	-	-
10	DSE	Elective 3 **Botany 21** (Plant Identification & Herbarium Technique / Ethnobotany)	BBO7P21	-	-	2	1	-	-	-	-	25	25	25
11	RM	Research Methodology	BBO7T22	2	-	-	2	3	80	20	40	-	-	-
12	RM	Research Methodology	BBO7P22	-	-	4	2	-	-	-	-	50	50	50
Total				13	-	14	**20**		**520**	**130**		**175**	**175**	

B.Sc. Sem-VIII (Honors) (Botany - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	**Botany-23** Plant Physiology and Biochemistry.	BBO8T23	2	-	-	2	3	80	20	40	-	-	-
2	DSC	**Botany-23** Plant Physiology and Biochemistry.	BBO8P23	-	-	2	1	-	-	-	-	25	25	25
3	DSC	**Botany-24** Plant Development and Reproductive Biology	BBO8T24	2	-	-	2	3	80	20	40	-	-	-
4	DSC	**Botany-24** Plant Development and Reproductive Biology	BBO8P24	-	-	2	1	-	-	-	-	-	50	25
5	DSC	**Botany-25** Cell and Molecular Biology-I	BBO8T25	2	-	-	2	3	80	20	40	-	-	-
6	DSC	**Botany-25** Cell and Molecular Biology-I	BBO8P25	-	-	2	1	-	-	-	-	25	25	25
7	DSC	**Botany-26** Angiosperms-I and Ethnobotany	BBO8T26	2	-	-	2	3	80	20	40	-	-	-
8	DSC	**Botany-26** Angiosperms-I and Ethnobotany	BBO8P26	-	-	2	1	-	-	-	-	-	50	25
9	DSE	Elective 4 **Botany-27** (Biodiversity and Environment / Plant Biochemistry)	BBO8T27	3	-	-	3	3	120	30	60	-	-	-
10	DSE	Elective 4 **Botany-27** (Biodiversity and Environment / Plant Biochemistry)	BBO8P27	-	-	2	1	-	-	-	-	25	25	25
11	OJT	Apprenticeship (Related to DSC)	BOJ8P02	-	-	8	4	-	-	-	-	100	100	100
Total				11	-	18	**20**		**440**	**110**		**225**	**225**	

Four Year UG Honours Degree in Major and Minor with 160-176 credits

B.Sc. Sem-VII (Research) (Botany - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	**Botany-17** Microbiology, Algae and Fungi	BBO7T17R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	**Botany-17** Microbiology, Algae and Fungi	BBO7P17R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	**Botany-** 18 Palaeobotany and Gymnosperms	BBO7T18R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	**Botany-** 18 Palaeobotany and Gymnosperms	BBO7P18R	-	-	2	1	-	-	-	-	-	50	25
5	DSC	**Botany-19** Cytology and Genetics	BBO7T19R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	**Botany-19** Cytology and Genetics	BBO7P19R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 3 **Botany 20** (Plant Identification & Herbarium Technique / Ethnobotany)	BBO7T20R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 3 **Botany 20** (Plant Identification & Herbarium Technique / Ethnobotany)	BBO7P20R	-	-	2	1	-	-	-	-	-	50	25
9	RM	Research Methodology	BBO7T21R	2	-	-	2	3	80	20	40	-	-	-
10	RM	Research Methodology	BBO7P21R	-	-	4	2	-	-	-	-	50	50	50
11	RP	Research Project/ Dissertation (Core)	BRP7P01	-	-	6	3	-	-	-	-	75	75	75
Total				11	-	18	**20**		**440**	**110**		**225**	**225**	

'R' in the subject code indicates 'Research'.

B.Sc. Sem-VIII (Research) (Botany- Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min	SEE	CIE	Min
1	DSC	**Botany-22** Plant Physiology and Biochemistry Ethnobotany.	BBO8T22R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	**Botany-22** Plant Physiology and Biochemistry Ethnobotany.	BBO8P22R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	**Botany-23** Plant Development, Reproductive Biology and Angiosperms-I	BBO8T23R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	**Botany-23** Plant Development, Reproductive Biology and Angiosperms-I	BBO8P23R	-	-	2	1	-	-	-	-	-	50	25
5	DSC	**Botany-24** Cell and Molecular Biology-I	BBO8T24R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	**Botany-24** Cell and Molecular Biology-I	BBO8P24R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 4 **Botany-25** (Biodiversity and Environment / Plant Biochemistry)	BBO8T25R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 4 **Botany-25** (Biodiversity and Environment / Plant Biochemistry)	BBO8P25R	-	-	2	1	-	-	-	-	-	50	25
9	RP	Research Project / Dissertation (Core)	BRP8P02	-	-	14	7 (4+2 +1)	-	-	-	-	175	175	175
Total				09	-	22	**20**		**360**	**90**		**275**	**275**	

'R' in the subject code indicates 'Research'.

Four Year UG Honours with Research Degree in Major and Minor with 160-176 credits

Total Credits:

1. Three Year UG Degree Program: 132
2. Four Year UG Degree Program: 172

Abbreviations: 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

VSC Basket (Botany)

Semester	Course Category	Name of Course	BoS	Course Code
I	**VSC**	Identification of Angiospermic plants	Botany	**BVS1P01**
II	**VSC**	Horticulture	Botany	**BVS2P03**
III	**VSC**	Plant pathology and Disease management	Botany	**BVS3P05**
V	**VSC**	Plant propagation and tissue culture	Botany	**BVS5P07**
VI	**VSC**			**BVS6P08**

Basket for ELECTIVE (DSE) Category Courses (Botany)

Semester	Course Category	Name of Course	Course Code
V	Elective 1	A. Pharmacognosy and Phytochemistry B. Forestry	BBO5T12
VI	Elective 2	A. Molecular biology & Bioinformatics B. LaboratoryTechniques	BBO6T16
VII (Honors)	Elective 3	A. Plant Identification & Herbarium Technique B. Ethnobotany	BBO7T21
VIII (Honors)	Elective 4	A. Biodiversity and Environment B. Plant Biochemistry	BBO8T27
VII (Research)	Elective 3	A. Plant Identification & Herbarium Technique B. Ethnobotany	BBO7T20R
VIII (Research)	Elective 4	A. Biodiversity and Environment B. Plant Biochemistry	BBO7T25R

Model Question Paper Format

Time:-3Hrs. Max.Marks:80

Note:-1.All questions are compulsory.
2. Each question carries equal marks.

Q. 1. Write on:-

(A) Unit-I 8Marks
(B) Unit-I 8Marks

OR

Write Short Notes on:-

(C) Unit-I 4Marks
(D) Unit-I 4Marks
(E) Unit-I 4Marks
(F) Unit-I 4Marks

Q. 2. Write on:-

(A) Unit-II 8Marks
(B) Unit-II 8Marks

OR

Write Short Notes on:-

(A) Unit-II 4Marks
(B) Unit-II 4Marks
(C) Unit-II 4Marks
(D) Unit-II 4Marks

Q. 3. Write on:-

(A) Unit-III 8Marks
(B) Unit-III 8Marks

OR

Write Short Notes on:-

(A) Unit-III 4Marks
(B) Unit-III 4Marks
(C) Unit-III 4Marks
(D) Unit-III 4Marks

Q. 4. Write on:-

(A) Unit-IV 8Marks
(B) Unit-IV 8Marks

OR

Write Short Notes on:-

(A) Unit-IV 4Marks
(B) Unit-IV 4Marks
(C) Unit-IV 4Marks
(D) Unit-IV 4Marks

Q. 5. Write in Three to Four Lines Diagrams are not necessary.

(A) Unit-I 2Marks
(B) Unit-I 2Marks
(C) Unit-II 2Marks
(D) Unit-II 2Marks
(E) Unit-III 2Marks
(F) Unit-III 2Marks
(G) Unit-IV 2Marks
(H) Unit-IV 2Marks

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur 440033

Scheme and Syllabus

Bachelor of Science (Biochemistry)

Submitted by

Board of Studies,

Bachelor of Science (Biochemistry)

FYUGP-Scheme I-VIII Semester
Bachelor of Science (Honors/Research)
(Biochemistry - Major)
Four Year (Eight Semester Degree Course)
Teaching and Examination Scheme

B.Sc. Sem-I (Biochemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Biomolecules & Nutritional Biochemistry	BBC1T01	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Biomolecules & Nutritional Biochemistry	BBC1P01	-		2	1	-	-	-	-	25	25	25
3	DSC	Microbial Biochemistry	BBC1T02	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Microbial Biochemistry	BBC1P02	-		2	1	-	-	-	-	-	50	25
5	GE/OE	Refer GE/OE Basket	BGO1T01	2	-	-	2	3	80	20	40	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO1T02	2	-	-	2	3	80	20	40	-	-	-
7	VSC	Refer VSC Basket	BVS1P01	-	-	4	2	-	-	-	-	50	50	50
8	SEC	Refer SEC Basket	BVS1P02	-	-	4	2	-	-	-	-	50	50	50
9	AEC	English Compulsory	BAE1T01	2	-	-	2	3	50	50	40	-	-	-
10	VEC	Environmental Sci.	BVE1T01	2	-	-	2	3	80	20	40	-	-	-
11	IKS	Vedic Mathematics	BIK1T01	2	-	-	2	3	80	20	40	-	-	-
12	CC	Refer CC Basket	BCC1P01	-	-	4	2	-	-	-	-	-	100	50
Total				14	-	16	**22**		**530**	**170**		**150**	**250**	

B.Sc. Sem-II (Biochemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Human Physiology & Clinical Biochemistry	BBC2T03	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Human Physiology & Clinical Biochemistry	BBC2P03			2	1	-	-	-	-	25	25	25
3	DSC	Techniques in Biochemistry	BBC2T04	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Techniques in Biochemistry	BBC2P04			2	1	-	-	-	-	-	50	25
5	GE/OE	Refer GE/OE Basket	BGO2T03	2	-	-	2	3	80	20	40	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO2T04	2	-	-	2	3	80	20	40	-	-	-
7	VSC	Microbial Culture Media	BVS2P03	-	-	4	2	-	-	-	-	50	50	50
8	SEC	Refer SEC Basket	BVS2P04	-	-	4	2	-	-	-	-	50	50	50
9	AEC	Second Language	BAE2T02	2	-	-	2	3	50	50	40	-	-	-
10	VEC	Constitution of India	BVE2T02	2	-	-	2	3	80	20	40	-	-	-
11	IKS	Indian Astronomy	BIK2T02	2	-	-	2	3	-	-	-	50	50	50
12	CC	Refer CC Basket	BCC2P02	-	-	4	2	-	-	-	-	-	100	50
Total				14	-	16	**22**		**530**	**170**		**150**	**250**	

Exit option: Award of UG Certificate in Major with 40-44 credits and an additional 4 credits core NSQF course/ Internship ORContinue with Major and Minor

B.Sc. Sem-III (Biochemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Agriculture Biochemistry	BBC3T05	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Agriculture Biochemistry	BBC3P05	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Enzymes and Enzyme Technology	BBC3T06	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Enzymes and Enzyme Technology	BBC3P06	-	-	2	1	-	-	-	-	-	50	25
5	Minor	Minor 1 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
6	Minor	Minor 1 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
7	Minor	Minor 2 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
8	Minor	Minor 2 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
9	GE/OE	Refer GE/OE Basket	BGO3T05	2	-	-	2	3	80	20	40	-	-	-
10	VSC	Food Processing Techniques	BVS3P05	-	-	4	2	-	-	-	-	50	50	50
11	AEC	Second Language	BAE3T03	2	-	-	2	3	50	50	40	-	-	-
12	FP	Field Project	BFP3P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC3P03	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	**22**		**450**	**150**		**200**	**300**	

B.Sc. Sem-IV (Biochemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Molecular Biology-Prokaryotes	BBC4T07	2	-	-	2	3	80	20	40	-	--	
2	DSC	Molecular Biology-Prokaryotes	BBC4P07	-	-	2	1					25	25	25
3	DSC	Metabolism	BBC4T08	2	-	-	2	3	80	20	40	-	--	
4	DSC	Metabolism	BBC4P08	-	-	2	1					-	50	25
5	Minor	Minor 3 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	--	
6	Minor	Minor 3 (Refer Minor Basket)		-	-	2	1					25	25	25
7	Minor	Minor 4 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	--	
8	Minor	Minor 4 (Refer Minor Basket)		-	-	2	1					-	50	25
9	GE/OE	Refer GE/OE Basket	BGO4T06	2	-	-	2	3	80	20	40	-	-	-
10	SEC	Refer SEC Basket	BVS4T06	-	-	4	2	-	-	-	-	50	50	50
11	AEC	English Compulsory	BAE4T03	2	-	-	2	3	50	50	40	-	-	-
12	CEP	Community Service	BCM4P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC4P04	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	**22**		**450**	**150**		**200**	**300**	

Exit option; Award of UG Diploma in Major and Minor with 80-88 credits and an additional 4 credits core NSQF course/ Internship ORContinue with Major and Minor

B.Sc. Sem-V (Biochemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Molecular Biology-Eukaryotes	BBC5T09	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Molecular Biology-Eukaryotes	BBC5P09	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Advanced Biophysical Techniques	BBC5T10	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Advanced Biophysical Techniques	BBC5P10	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Cell Communication and Signalling	BBC5T11	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Cell Communication and Signalling	BBC5P11	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Molecular Genetics or Forensic Biochemistry	BBC5T12	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Molecular Genetics or Forensic Biochemistry	BBC5P12	-	-	2	1	-	-	-	-	-	50	25
9	Minor	Minor 5 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 5 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
11	Minor	Minor 6 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
12	Minor	Minor 6 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
13	VSC	Refer VSC Basket	BVS5P07	-	-	4	2	-	-	-	-	50	50	50
14	CEP	Community Service	BCM5P02	-	-	2	1	-	-	-	-	25	25	25
Total				**13**	**-**	**18**	**22**	**-**	**520**	**130**	**--**	**225**	**225**	**-**

B.Sc. Sem-VI (Biochemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Genetic Engineering	BBC6T13	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Genetic Engineering	BBC6P13	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Biochemistry of Diseases	BBC6T14	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Biochemistry of Diseases	BBC6P14	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Immunology	BBC6T15	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Immunology	BBC6P15	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Immunodiagnostics or Molecular sequencing Techniques	BBC6T16	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Immunodiagnostics or Molecular sequencing Techniques	BBC6P16	-	-	2	1	-	-	-	-	-	50	25
9	Minor	Minor 7 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 7 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
11	VSC	Refer VSC Basket	BVS6P08	-	-	4	2	-	-	-	-	50	50	50
12	OJT	Internship (Related to DSC)	BOJ6P01	-	-	8	4	-	-	-	-	100	100	100
Total				11	-	22	**22**		**440**	**110**		**275**	**275**	

Exit option: Award of UG Degree in Major with 120-132 credits OR Continue with Major and Minor

B.Sc. Sem-VII (Honors) (Biochemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Bioinformatics	BBC7T17	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Bioinformatics	BBC7P17			2	1	-	-	-	-	25	25	25
3	DSC	Protein Biochemistry	BBC7T18	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Protein Biochemistry	BBC7P18			2	1	-	-	-	-	-	50	25
5	DSC	Applied Biochemistry	BBC7T19	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Applied Biochemistry	BBC7P19			2	1	-	-	-	-	25	25	25
7	DSC	Neurobiochemistry	BBC7T20	2	-	-	2	3	80	20	40	-	-	-
8	DSC	Neurobiochemistry	BBC7P20			2	1	-	-	-	-	-	50	25
9	DSE	Scientific communications and Data representations OR Obesity &Endocrine Disorders	BBC7T21	3	-	-	3	3	120	30	60	-	-	-
10	DSE	Scientific communications and Data representations OR Obesity &Endocrine Disorders	BBC7P21	-	-	2	1	-	-	-	-	25	25	25
11	RM	Research Methodology	BBC7T22	2	-	-	2	3	80	20	40			
12	RM	Research Methodology	BBC7P22	-	-	4	2	-	-	-	-	50	50	50
Total				13	-	14	**20**		**520**	**130**		**175**	**175**	

B.Sc. Sem-VIII (Honors) (Biochemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Toxicology and clinical research	BBC8T23	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Toxicology and clinical research	BBC8P23	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Protein Engineering and Drug delivery	BBC8T24	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Protein Engineering and Drug delivery	BBC8P24	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Environmental Biochemistry	BBC8T25	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Environmental Biochemistry	BBC8P25	-	-	2	1	-	-	-	-	25	25	25
7	DSC	Secondary Metabolites and Its Applications	BBC8T26	2	-	-	2	3	80	20	40	-	-	-
8	DSC	Secondary Metabolites and Its Applications	BBC8P26	-	-	2	1	-	-	-	-	-	50	25
9	DSE	Reproductive Biochemistry OR Cancer Biology	BBC8T27	3	-	-	3	3	120	30	60	-	-	-
10	DSE	Reproductive Biochemistry OR Cancer Biology	BBC8P27	-	-	2	1					25	25	25
11	OJT	Apprenticeship (Related to DSC)	BOJ8P02	-	-	8	4	-	-	-	-	100	100	100
Total				11	-	18	**20**		**440**	**110**		**225**	**225**	

Four Year UG Honours Degree in Major and Minor with 160-176 credits

B.Sc. Sem-VII (Research) (Biochemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Bioinformatics & Protein Biochemistry	BBC7T17R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Bioinformatics & Protein Biochemistry	BBC7P17R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Neurobiochemistry	BBC7T18R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Neurobiochemistry	BBC7P18R	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Applied Biochemistry	BBC7T19R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Applied Biochemistry	BBC7P19R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Scientific communications and Data representations OR Model Systems for Research	BBC7T20R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Scientific communications and Data representations OR Model Systems for Research	BBC7P20R	-	-	2	1	-	-	-	-	-	50	25
9	RM	Research Methodology	BBC7T21R	2	-	-	2	3	80	20	40	-	-	-
10	RM	Research Methodology	BBC7P21R	-	-	4	2	-	-	-	-	50	50	50
11	RP	Research Project/ Dissertation (Core)	BRP7P01	-	-	6	3	-	-	-	-	75	75	75
Total				11	-	18	**20**		**440**	**110**		**225**	**225**	

'R' in the subject code indicates 'Research'.

B.Sc. Sem-VIII (Research) (Biochemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min	SEE	CIE	Min
1	DSC	Toxicology, &Clinical Research and + Environmental Biochemistry	BBC8T22 R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Toxicology, &Clinical Research and + Environmental Biochemistry	BBC8P22 R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Protein Engineering and Drug delivery	BBC8T23 R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Protein Engineering and Drug delivery	BBC8P23 R	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Secondary Metabolites and Its Applications	BBC8T24 R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Secondary Metabolites and Its Applications	BBC8P24 R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Reproductive Biochemistry OR Cancer Biology	BBC8T25 R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Reproductive Biochemistry OR Cancer Biology	BBC8P25 R	-	-	2	1	-	-	-	-	-	50	25
9	RP	Research Project / Dissertation (Core)	BRP8P02	-	-	14	7 (4+2+1)	-	-	-	-	175	175	175
Total				09	-	22	**20**		**360**	**90**		**275**	**275**	

'R' in the subject code indicates 'Research'.

Four Year UG Honours with Research Degree in Major and Minor with 160-176 credits

Total Credits: 1. Three Year UG Degree Program: 132

2. Four Year UG Degree Program: 172

Abbreviations: 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

VSC Basket (Biochemistry)

Semester	Course Category	Name of Course	BoS	Course Code
I	**VSC**	Microbial Culture media	Biochemistry	**BVS1P01**
II	**VSC**	Food Processing Techniques	Biochemistry	**BVS2P03**
III	**VSC**	Protein Purification	Biochemistry	**BVS3P05**
V	**VSC**	Methods of DNA Analysis	Biochemistry	**BVS5P07**
VI	**VSC**	Data Retrieval & Analysis	Biochemistry	**BVS6P08**

Basket for ELECTIVE (DSE) Category Courses (Biochemistry)

Semester	Course Category	Name of Course	Course Code
V	Elective 1	A. Molecular Genetics B. Forensic Biochemistry	BBC5T12
VI	Elective 2	A. Immunodiagnostics B. Molecular sequencing Techniques	BBC6T16
VII (Honors)	Elective 3	A. Scientific communications and Data representations B. Obesity & Endocrine Disorders	BBC7T21
VIII (Honors)	Elective 4	A. Reproductive Biochemistry B. Cancer Biology	BBC8T27
VII (Research)	Elective 3	A. Scientific communications and Data representations B. Model Systems for Research	BBC7T20R
VIII (Research)	Elective 4	A. Reproductive Biochemistry B. Cancer Biology	BBC7T25R

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur 440033

Scheme and Syllabus
Bachelor of Science (Biotechnology)

Submitted by

Board of Studies,
Bachelor of Science (Biotechnology)

FYUGP-Scheme I-VIII Semester

Bachelor of Science (Honors/Research)

(Biotechnology - Major)

Four Year (Eight Semester Degree Course)

Teaching and Examination Scheme

B.Sc. Sem-I (Biotechnology- Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Introductory Microbial Biotechnology	BBT1T01	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Introductory Microbial Biotechnology	BBT1P01	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Cellular Macromolecules	BBT1T02	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Cellular Macromolecules	BBT1P02	-	-	2	1	-	-	-	-	-	50	25
5	GE/OE	Refer GE/OE Basket	BGO1T01	2	-	-	2	3	80	20	40	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO1T02	2	-	-	2	3	80	20	40	-	-	-
7	VSC	Basic Transformation Techniqus	BVS1P01	-	-	4	2	-	-	-	-	50	50	50
8	SEC	Refer SEC Basket	BVS1P02	-	-	4	2	-	-	-	-	50	50	50
9	AEC	English Compulsory	BAE1T01	2	-	-	2	3	50	50	40	-	-	-
10	VEC	Environmental Sci.	BVE1T01	2	-	-	2	3	80	20	40	-	-	-
11	IKS	Vedic Mathematics	BIK1T01	2	-	-	2	3	80	20	40	-	-	-
12	CC	Refer CC Basket	BCC1P01	-	-	4	2	-	-	-	-	-	100	50
Total				14	-	16	**22**		**530**	**170**		**150**	**250**	

B.Sc. Sem-II (Biotechnology- Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Techniques in Biotechnology	BBT2T03	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Techniques in Biotechnology	BBT2P03	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Enzyme Technology	BBT2T04	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Enzyme Technology	BBT2P04	-	-	2	1	-	-	-	-	-	50	25
5	GE/OE	Refer GE/OE Basket	BGO2T03	2	-	-	2	3	80	20	40	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO2T04	2	-	-	2	3	80	20	40	-	-	-
7	VSC	Dairy Technology	BVS2P03	-	-	4	2	-	-	-	-	50	50	50
8	SEC	Refer SEC Basket	BVS2P04	-	-	4	2	-	-	-	-	50	50	50
9	AEC	Second Language	BAE2T02	2	-	-	2	3	50	50	40	-	-	-
10	VEC	Constitution of India	BVE2T02	2	-	-	2	3	80	20	40	-	-	-
11	IKS	Indian Astronomy	BIK2T02	2	-	-	2	3	-	-	-	50	50	50
12	CC	Refer CC Basket	BCC2P02	-	-	4	2	-	-	-	-	-	100	50
Total				14	-	16	**22**		**530**	**170**		**150**	**250**	

Exit option: Award of UG Certificate in Major with 40-44 credits and an additional 4 credits core NSQF course/ Internship ORContinue with Major and Minor

B.Sc. Sem-III (Biotechnology- Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Molecular Biology –I	BBT3T05	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Molecular Biology –I	BBT3P05	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Molecular Biology -II	BBT3T06	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Molecular Biology -II	BBT3P06	-	-	2	1	-	-	-	-	-	50	25
5	Minor	Minor 1 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
6	Minor	Minor 1 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
7	Minor	Minor 2 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
8	Minor	Minor 2 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
9	GE/OE	Refer GE/OE Basket	BGO3T05	2	-	-	2	3	80	20	40	-	-	-
10	VSC	Refer VSC Basket	BVS3P05	-	-	4	2	-	-	-	-	50	50	50
11	AEC	Second Language	BAE3T03	2	-	-	2	3	50	50	40	-	-	-
12	FP	Field Project	BFP3P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC3P03	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	**22**		**450**	**150**		**200**	**300**	

B.Sc. Sem-IV (Biotechnology- Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Fundamentals of Genetic Engineering	BBT4T07	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Fundamentals of Genetic Engineering	BBT4907	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Microbial Genetics	BBT4T08	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Microbial Genetics	BBT4P08	-	-	2	1	-	-	-	-	-	50	25
5	Minor	Minor 3 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
6	Minor	Minor 3 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
7	Minor	Minor 4 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
8	Minor	Minor 4 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
9	GE/OE	Refer GE/OE Basket	BGO4T06	2	-	-	2	3	80	20	40	-	-	-
10	SEC	Refer SEC Basket	BVS4T06	-	-	4	2	-	-	-	-	50	50	50
11	AEC	English Compulsory	BAE4T03	2	-	-	2	3	50	50	40	-	-	-
12	CEP	Community Service	BCM4P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC4P04	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	**22**		**450**	**150**		**200**	**300**	

Exit option; Award of UG Diploma in Major and Minor with 80-88 credits and an additional 4 credits core NSQF course/ Internship ORContinue with Major and Minor

B.Sc. Sem-V (Biotechnology- Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Immunology	BBT5T09	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Immunology	BBT5P09	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Medical Biotechnology	BBT5T10	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Medical Biotechnology	BBT5P10	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Techniques for gene editing	BBT5T11	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Techniques for gene editing	BBT5P11	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 1	BBT5T12	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 1	BBT5P12	-	-	2	3	-	-	-	-	-	50	25
9	Minor	Minor 5 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 5 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
11	Minor	Minor 6 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
12	Minor	Minor 6 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
13	VSC	Refer VSC Basket	BVS5P07	-	-	4	2	-	-	-	-	50	50	50
14	CEP	Community Service	BCM5P02	-	-	2	1	-	-	-	-	25	25	25
Total				**13**	**-**	**18**	**22**	**-**	**520**	**130**	**--**	**225**	**225**	**-**

B.Sc. Sem-VI (Biotechnology- Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Industrial Biotechnology	BBT6T13	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Industrial Biotechnology	BBT6P13			2	1	-	-	-	-	25	25	25
3	DSC	Environmental Biotechnology	BBT6T14	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Environmental Biotechnology	BBT6P14			2	1	-	-	-	-	-	50	25
5	DSC	Gene Transformation Techniques	BBT6T15	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Gene Transformation Techniques	BBT6P15			2	1	-	-	-	-	25	25	25
7	DSE	Elective 2	BBT6T16	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 2	BBT6P16	-	-	2	1	-	-	-	-	-	50	25
9	Minor	Minor 7 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 7 (Refer Minor Basket)				2	1	-	-	-	-	25	25	25
11	VSC	Refer VSC Basket	BVS6P08	-	-	4	2	-	-	-	-	50	50	50
12	OJT	Internship (Related to DSC)	BOJ6P01	-	-	8	4	-	-	-	-	100	100	100
Total				11	-	22	**22**		**440**	**110**		**275**	**275**	

Exit option: Award of UG Degree in Major with 120-132 credits OR Continue with Major and Minor

B.Sc. Sem-VII (Honors) (Biotechnology- Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Genomics	BBT7T17	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Genomics	BBT7P17	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Proteomics	BBT7T18	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Proteomics	BBT7P18	-	-	2	1	-	-	-	-	-	50	25
3	DSC	Bioinformatics-I	BBT7T19	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Bioinformatics-I	BBT7P19	-		2	1	-	-	-	-	25	25	25
5	DSC	Bioinformatics-II	BBT7T20	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Bioinformatics-II	BBT7P20	-		2	1	-	-	-	-	-	50	25
7	DSE	Elective 3	BBT7T21	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 3	BBT7P21	-		2	1	-	-	-	-	25	25	25
9	RM	Research Methodology	BBT7T22	2	-	-	2	3	80	20	40	-	-	-
10	RM	Research Methodology	BBT7P22	-		4	2	-	-	-	-	50	50	50
Total				13	-	14	**20**		**520**	**130**		**175**	**175**	

B.Sc. Sem-VIII (Honors) (Biotechnology- Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Molecular Diagnostics	BBT8T23	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Molecular Diagnostics	BBT8P23	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Agricultural Biotechnology	BBT8T24	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Agricultural Biotechnology	BBT8P24	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Systems Biology-I	BBT8T25	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Systems Biology-I	BBT8P25	-	-	2	1	-	-	-	-	25	25	25
7	DSC	Systems Biology-II	BBT8T26	2	-	-	2	3	80	20	40	-	-	-
8	DSC	Systems Biology-II	BBT8P26	-	-	2	1	-	-	-	-	-	50	25
9	DSE	Elective 4	BBT8T27	3	-	-	3	3	120	30	60	-	-	-
10	DSE	Elective 4	BBT8P27	-	-	2	1	-	-	-	-	25	25	25
11	OJT	Apprenticeship (Related to DSC)	BOJ8P02	-	-	8	4	-	-	-	-	100	100	100
Total				11	-	18	**20**		**440**	**110**		**225**	**225**	

Four Year UG Honours Degree in Major and Minor with 160-176 credits

B.Sc. Sem-VII (Research) (Biotechnology- Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Genomics	BBT7T17R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Genomics	BBT7P17R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Proteomics	BBT7T18R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Proteomics	BBT7P18R	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Bioinformatics	BBT7T19R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Bioinformatics	BBT7P19R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 3	BBT7T20R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 3	BBT7P20R	-	-	2	1	-	-	-	-	-	50	25
9	RM	Research Methodology	BBT7T21R	2	-	-	2	3	80	20	40	-	-	-
10	RM	Research Methodology	BBT7P21R	-	-	4	2	-	-	-	-	50	50	50
11	RP	Research Project/ Dissertation (Core)	BRP7P01	-	-	6	3	-	-	-	-	75	75	75
Total				11	-	18	**20**		**440**	**110**		**225**	**225**	

'R' in the subject code indicates 'Research'.

B.Sc. Sem-VIII (Research) (Biotechnology- Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min	SEE	CIE	Min
1	DSC	Molecular Diagnostics	BBT8T22R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Molecular Diagnostics	BBT8P22R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Agricultural Biotechnology	BBT8T23R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Agricultural Biotechnology	BBT8P23R	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Systems Biology	BBT8T24R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Systems Biology	BBT8P24R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 4	BBT8T25R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 4	BBT8P25R	-	-	2	1	-	-	-	-	-	50	25
9	RP	Research Project / Dissertation (Core)	BRP8P02	-	-	14	7 (4+2+1)	-	-	-	-	175	175	175
Total				09	-	22	**20**		**360**	**90**		**275**	**275**	

'R' in the subject code indicates 'Research'.

Four Year UG Honours with Research Degree in Major and Minor with 160-176 credits

Total Credits:

1. Three Year UG Degree Program: 132
2. Four Year UG Degree Program: 172

Abbreviations: 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

VSC Basket (Biotechnology)

Semester	Course Category	Name of Course	BoS	Course Code
I	**VSC**	Basic Transformation Techniques	Biotechnology	**BVS1P01**
II	**VSC**	Dairy Technology	Biotechnology	**BVS2P03**
III	**VSC**	Polymerase Chain Reaction (PCR) in Diagnostics	Biotechnology	**BVS3P05**
V	**VSC**	Next Generation Sequencing	Biotechnology	**BVS5P07**
VI	**VSC**	Tools for Scientific Communication	Biotechnology	**BVS6P08**

Basket for <u>ELECTIVE</u> (DSE) Category Courses (Biotechnology)

Semester	Course Category	Name of Course	Course Code
V	Elective 1	**A.** Vaccinology **B.** Gene Therapy	BBT5T12
VI	Elective 2	**A.** Fermentation Technology **B**. Food Biotechnology	BBT6T16
VII (Honors)	Elective 3	**A.** Drug Discovery and Development **B.** Transcriptomics	BBT7T21
VIII (Honors)	Elective 4	**A.** Ethics in Biotechnology **B.** Nanobiotechnology	BBT8T27
VII (Research)	Elective 3	**A.** Drug Discovery and Development **B**. Transcriptomics	BBT7T20R
VIII (Research)	Elective 4	**A**. Ethics in Biotechnology **B**. Nanobiotechnology	BBT7T25R

'R' in the subject code indicates 'Research'.

FYUGP-Scheme I-VIII Semester

Bachelor of Science (Honors/Research)

(Chemistry - Major)

Four Year (Eight Semester Degree Course)

Teaching and Examination Scheme

B.Sc. Sem-I (Chemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Inorganic Chemistry-1 (Atomic structure, bonding and main group elements)	BCH1T01	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Inorganic Chemistry-1 (Atomic structure, bonding and main group elements)	BCH1P01	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Organic Chemistry-1 (Fundamentals, stereochemistry and hydrocarbons)	BCH1T02	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Organic Chemistry-1 (Fundamentals, stereochemistry and hydrocarbons)	BCH1P02	-	-	2	1	-	-	-	-	-	50	25
5	GE/OE	Refer GE/OE Basket	BGO1T01	2	-	-	2	3	80	20	40	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO1T02	2	-	-	2	3	80	20	40	-	-	-
7	VSC	Soap, detergent and disinfectant Technology	BVS1P01	-	-	4	2	-	-	-	-	50	50	50
8	SEC	Refer SEC Basket	BVS1P02	-	-	4	2	-	-	-	-	50	50	50
9	AEC	English Compulsory	BAE1T01	2	-	-	2	3	50	50	40	-	-	-
10	VEC	Environmental Sci.	BVE1T01	2	-	-	2	3	80	20	40	-	-	-
11	IKS	Vedic Mathematics	BIK1T01	2	-	-	2	3	80	20	40	-	-	-
12	CC	Refer CC Basket	BCC1P01	-	-	4	2	-	-	-	-	-	100	50
Total				14	-	16	**22**		**530**	**170**		**150**	**250**	

B.Sc. Sem-II (Chemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Organic Chemistry-2 (Functional group chemistry)	BCH2T03	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Organic Chemistry-2 (Functional group chemistry)	BCH2P03			2	1	-	-	-	-	25	25	25
3	DSC	Physical Chemistry-1 (Thermodynamics, gaseous and liquid states)	BCH2T04	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Physical Chemistry-1 (Thermodynamics, gaseous and liquid states)	BCH2P04			2	1	-	-	-	-	-	50	25
5	GE/OE	Refer GE/OE Basket	BGO2T03	2	-	-	2	3	80	20	40	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO2T04	2	-	-	2	3	80	20	40	-	-	-
7	VSC	Drug synthesis and analysis	BVS2P03	-	-	4	2	-	-	-	-	50	50	50
8	SEC	Refer SEC Basket	BVS2P04	-	-	4	2	-	-	-	-	50	50	50
9	AEC	Second Language	BAE2T02	2	-	-	2	3	50	50	40	-	-	-
10	VEC	Constitution of India	BVE2T02	2	-	-	2	3	80	20	40	-	-	-
11	IKS	Indian Astronomy	BIK2T02	2	-	-	2	3	80	20	40	-	-	-
12	CC	Refer CC Basket	BCC2P02	-	-	4	2	-	-	-	-	-	100	50
Total				14	-	16	**22**		**530**	**170**		**150**	**250**	

Exit option: Award of UG Certificate in Major with 40-44 credits and an additional 4 credits core NSQF course/ Internship ORContinue with Major and Minor

B.Sc. Sem-III (Chemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Physical Chemistry-2 (Surface chemistry, phase equilibria, electrochemistry and kinetics)	BCH3T05	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Physical Chemistry-2 (Surface chemistry, phase equilibria, electrochemistry and kinetics)	BCH3P05	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Inorganic Chemistry-2 (Bonding, transition elements and solutions)	BCH3T06	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Inorganic Chemistry-2 (Bonding, transition elements and solutions)	BCH3P06	-	-	2	1	-	-	-	-	-	50	25
5	Minor	Minor 1 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
6	Minor	Minor 1 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
7	Minor	Minor 2 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
8	Minor	Minor 2 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
9	GE/OE	Refer GE/OE Basket	BGO3T05	2	-	-	2	3	80	20	40	-	-	-
10	VSC	Refer VSC Basket	BVS3P05	-	-	4	2	-	-	-	-	50	50	50
11	AEC	Second Language	BAE3T03	2	-	-	2	3	50	50	40	-	-	-
12	FP	Field Project	BFP3P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC3P03	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	**22**		**450**	**150**		**200**	**300**	

B.Sc. Sem-IV (Chemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Inorganic Chemistry-3 (Coordination chemistry, Redox reactions and Inorganic Polymers)	BCH4T07	2	-	-	2	3	80	20	40			
2	DSC	Inorganic Chemistry-3 (Coordination chemistry, Redox reactions and Inorganic Polymers)	BCH4P07	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Organic Chemistry-3 (Nitrogen compounds, Heterocyclics and organometallics)	BCH4T08	2	-	-	2	3	80	20	40			
4	DSC	Organic Chemistry-3 (Nitrogen compounds, Heterocyclics and organometallics)	BCH4P08	-	-	2	1	-	-	-	-	-	50	25
5	Minor	Minor 3 (Refer Minor Basket)		2	-	-	2	3	80	20	40			
6	Minor	Minor 3 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
7	Minor	Minor 4 (Refer Minor Basket)		2	-	-	2	3	80	20	40			
8	Minor	Minor 4 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
9	GE/OE	Refer GE/OE Basket	BGO4T06	2	-	-	2	3	80	20	40	-	-	-
10	SEC	Refer SEC Basket	BVS4T06	-	-	4	2	-	-	-	-	50	50	50
11	AEC	English Compulsory	BAE4T03	2	-	-	2	3	50	50	40	-	-	-
12	CEP	Community Service	BCM4P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC4P04	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	**22**		**450**	**150**		**200**	**300**	

Exit option; Award of UG Diploma in Major and Minor with 80-88 credits and an additional 4 credits core NSQF course/ Internship ORContinue with Major and Minor

B.Sc. Sem-V (Chemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Organic Chemistry-4 (NMR, Enolates and Natural products)	BCH5T09	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Organic Chemistry-4 (NMR, Enolates and Natural products)	BCH5P09	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Physical Chemistry-3 (Solid state, Surface Chemistry, Spectroscopy and Quantum mechanics)	BCH5T10	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Physical Chemistry-3 (Solid state, Surface Chemistry, Spectroscopy and Quantum mechanics)	BCH5P10	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Inorganic Chemistry-4 (Complexes and Organometallics)	BCH5T11	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Inorganic Chemistry-4 (Complexes and Organometallics)	BCH5P11	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 1	BCH5T12	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 1	BCH5P12	-	-	2	1	-	-	-	-	-	50	25
9	Minor	Minor 5 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 5 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
11	Minor	Minor 6 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
12	Minor	Minor 6 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
13	VSC	Refer VSC Basket	BVS5P07	-	-	4	2	-	-	-	-	50	50	50
14	CEP	Community Service	BCM5P02	-	-	2	1	-	-	-	-	25	25	25
Total				**13**	**-**	**18**	**22**	**-**	**520**	**130**	**--**	**225**	**225**	**-**

B.Sc. Sem-VI (Chemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Physical Chemistry-4 (Electrochemistry, Quantum Chemistry and Characterization)	BCH6T13	2	-	-	2	3	80	20	40	-	-	-
	DSC	Physical Chemistry-4 (Electrochemistry, Quantum Chemistry and Characterization)	BCH6P13	-	-	2	1	-	-	-	-	25	25	25
2	DSC	Inorganic Chemistry-5 (Bioinorganic Chemistry)	BCH6T14	2	-	-	2	3	80	20	40	-	-	-
	DSC	Inorganic Chemistry-5 (Bioinorganic Chemistry)	BCH6P14	-	-	2	1	-	-	-	-	-	50	25
3	DSC	Organic Chemistry-5 (Molecules of life)	BCH6T15	2	-	-	2	3	80	20	40	-	-	-
	DSC	Organic Chemistry-5 (Molecules of life)	BCH6P15	-	-	2	1	-	-	-	-	25	25	25
4	DSE	Elective 2	BCH6T16	3	-	-	3	3	120	30	60	-	-	-
	DSE	Elective 2	BCH6P16	-	-	2	1	-	-	-	-	-	50	25
5	Minor	Minor 7 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
	Minor	Minor 7 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
6	VSC	Refer VSC Basket	BVS6P08	-	-	4	2	-	-	-	-	50	50	50
7	OJT	Internship (Related to DSC)	BOJ6P01	-	-	8	4	-	-	-	-	100	100	100
Total				11	-	22	**22**		**440**	**110**		**275**	**275**	

Exit option: Award of UG Degree in Major with 120-132 credits OR Continue with Major and Minor

B.Sc. Sem-VII (Honors) (Chemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Advanced Inorganic Chemistry-1	BCH7T17	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Advanced Inorganic Chemistry-1	BCH7P17	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Advanced Organic Chemistry-1	BCH7T18	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Advanced Organic Chemistry-1	BCH7P18	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Advanced Physical Chemistry-1	BCH7T19	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Advanced Physical Chemistry-1	BCH7P19	-	-	2	1	-	-	-	-	25	25	25
7	DSC	Advanced Analytical Chemistry-1	BCH7T20	2	-	-	2	3	80	20	40	-	-	-
8	DSC	Advanced Analytical Chemistry-1	BCH7P20	-	-	2	1	-	-	-	-	-	50	25
9	DSE	Elective 3	BCH7T21	3	-	-	3	3	120	30	60	-	-	-
10	DSE	Elective 3	BCH7P21	-	-	2	1	-	-	-	-	25	25	25
11	RM	Research Methodology	BCH7T22	2	-	-	2	3	80	20	40	-	-	-
12	RM	Research Methodology	BCH7P22	-	-	4	2	-	-	-	-	50	50	50
Total				13	-	14	**20**		**520**	**130**		**175**	**175**	

B.Sc. Sem-VIII (Honors) (Chemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Advanced Inorganic Chemistry-2	BCH8T23	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Advanced Inorganic Chemistry-2	BCH8P23	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Advanced Organic Chemistry-2	BCH8T24	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Advanced Organic Chemistry-2	BCH8P24	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Advanced Physical Chemistry-2	BCH8T25	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Advanced Physical Chemistry-2	BCH8P25	-	-	2	1	-	-	-	-	25	25	25
7	DSC	Advanced Analytical Chemistry-2	BCH8T26	2	-	-	2	3	80	20	40	-	-	-
8	DSC	Advanced Analytical Chemistry-2	BCH8P26	-	-	2	1	-	-	-	-	-	50	25
9	DSE	Elective 4	BCH8T27	3	-	-	3	3	120	30	60	-	-	-
10	DSE	Elective 4	BCH8P27	-	-	2	1	-	-	-	-	25	25	25
11	OJT	Apprenticeship (Related to DSC)	BOJ8P02	-	-	8	4	-	-	-	-	100	100	100
Total				11	-	18	**20**		**440**	**110**		**225**	**225**	

Four Year UG Honours Degree in Major and Minor with 160-176 credits

B.Sc. Sem-VII (Research) (Chemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Advanced Inorganic Chemistry-1	BCH7T17R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Advanced Inorganic Chemistry-1	BCH7P17R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Advanced Organic Chemistry-1	BCH7T18R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Advanced Organic Chemistry-1	BCH7P18R	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Advanced Physical Chemistry-1	BCH7T19R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Advanced Physical Chemistry-1	BCH7P19R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 3	BCH7T20R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 3	BCH7P20R	-	-	2	1	-	-	-	-	-	50	25
9	RM	Research Methodology	BCH7T21R	2	-	-	2	3	80	20	40	-	-	-
10	RM	Research Methodology	BCH7P21R	-	-	4	2	-	-	-	-	50	50	50
11	RP	Research Project/ Dissertation (Core)	BRP7P01	-	-	6	3	-	-	-	-	75	75	75
Total				11	-	18	**20**		**440**	**110**		**225**	**225**	

'R' in the subject code indicates 'Research'.

B.Sc. Sem-VIII (Research) (Chemistry - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min	SEE	CIE	Min
1	DSC	Advanced Inorganic Chemistry-2	BCH8T22R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Advanced Inorganic Chemistry-2	BCH8P22R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Advanced Organic Chemistry-2	BCH8T23R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Advanced Organic Chemistry-2	BCH8P23R	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Advanced Physical Chemistry-2	BCH8T24R	2	-		2	3	80	20	40	-	-	-
6	DSC	Advanced Physical Chemistry-2	BCH8P24R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 4	BCH8T25R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 4	BCH8P25R	-	-	2	1	-	-	-	-	-	50	25
9	RP	Research Project / Dissertation (Core)	BRP8P02	-	-	14	7 (4+2+1)	-	-	-	-	175	175	175
Total				09	-	22	**20**		**360**	**90**		**275**	**275**	

R' in the subject code indicates 'Research'

Four Year UG Honours with Research Degree in Major and Minor with 160-176 credits

Total Credits:

1. Three Year UG Degree Program: 132
2. Four Year UG Degree Program: 172

Abbreviations: 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

VSC Basket (Chemistry)

Semester	Course Category	Name of Course	BoS	Course Code
I	**VSC**	Soap, detergent and disinfectant Technology	Chemistry	**BVS1P01**
II	**VSC**	Drug synthesis and analysis	Chemistry	**BVS2P03**
III	**VSC**	Soil sampling and analysis	Chemistry	**BVS3P05**
V	**VSC**	Vocational IT skills	Chemistry	**BVS5P07**
VI	**VSC**	Oil and Fats technology	Chemistry	**BVS6P08**

Basket for <u>ELECTIVE</u> (DSE) Category Courses (Chemistry)

Semester	Course Category	Name of Course	Course Code
V	Elective 1	A. Basic Analytical Chemistry	BCH5T12
		B. Industrial Chemistry	
VI	Elective 2	A. Instrumental Methods of Analysis	BCH6T16
		B. Chemistry of dyes and drugs	
VII (Honors)	Elective 3	A. Environmental Chemistry	BCH7T21
		B. Chemistry of natural products	
VIII (Honors)	Elective 4	A. Polymer Chemistry	BCH8T27
		B. Organometallic and bioinorganic Chemistry	
VII (Research)	Elective 3	A. Environmental Chemistry	BCH7T20R
		B. Natural product chemistry	
VIII (Research)	Elective 4	A. Polymer Chemistry	BCH7T25R
		B. Organometallic and bioinorganic Chemistry	

B.Sc. Chemistry (Honours/ Research)

A four-year eight semester degree program

1. Introduction to B.Sc. (Honours/ Research) Chemistry

The Choice Based Credit System (CBCS) provides an opportunity to a student to choose courses from the syllabus comprising Core, Elective, Generic and Skill-based vocational courses. It offers a flexibility of programme structure while ensuring that the student gets a strong foundation in the subject and gains in-depth knowledge. The learning outcome based curriculum framework (LOCF) will provide students with a clear purpose to focus their learning efforts and enable them to make a well judged choice regarding the course they wish to study. This will suit the present day needs of students in terms of securing their paths towards higher studies or employment.

Programme Duration and Design: The B.Sc. (Hons/Res) Chemistry course is a eight semester course spread over four academic years. The teaching – learning process involves theory and practical classes and will be student-centred. Apart from the conventional chalk and talk method, power point presentations, audio–video tools, class discussions, simulations and virtual labs (wherever possible) will be used. Students will be encouraged to carry out short term projects and participate in industrial and institutional visits, seminars and workshops. Assessment will be based on continuous internal evaluation (CIE) and semester end examination (SEE). Each theory paper will be of 100 marks out of which 20% marks are for internal assessment while a practical paper will be of 50 marks comprising 50% internal assessment.

2. Learning Outcome-based Curriculum Framework in BSc (Hons/ Res) Chemistry

The Learning Outcomes-based Curriculum Framework (LOCF) for the B.Sc. (Hons/ Res) degree in Chemistry provides a broad structural framework that can accommodate the current curricular needs as well as gives sufficient flexibility to include changes in content that assume importance as the frontiers of science grow. The inherent flexibility in framework allows design of course basket in tune with individual preferences. The basic uniformity in core course design ensures smooth movement across universities in the country.

Nature and Extent: The B.Sc. (Hons/Res) Chemistry programme covers a wide range of basic and applied courses as well as courses of interdisciplinary nature.

Aims of the Programme: The core courses offered in the programme aim to build a strong conceptual chemical knowledge base in the student, the contents of electives and skill enhancement courses help them explore their fitness and suitability to pursue studies in these areas.

3. Programme Specific Outcomes (PSOs) in B.Sc. (Hons/Res) Chemistry

The B.Sc.(Hons/Res) programme in Chemistry is designed to develop in students in depth knowledge of the core concepts and principles that are central to the understanding of this core science discipline. Undergraduates pursuing this programme of study go through laboratory work that specifically develops their quantitative and qualitative skills, provides opportunities for critical thinking and team work, and exposes them to techniques useful for applied areas of scientific study.

1. ***Knowledge: Width and depth*****:** Students acquire theoretical knowledge and understanding of the fundamental concepts, principles and processes in main branches of chemistry, namely, organic chemistry, inorganic chemistry, physical chemistry, analytical chemistry and biochemistry. In depth understanding is the outcome of transactional effectiveness and treatment of specialized course contents. Width results from the choice of electives that students are offered.

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur 440033

Scheme and Syllabus
Bachelor of Science (Computer Science)

Submitted by

Board of Studies,
Bachelor of Science (Computer Science)

FYUGP-Scheme I-VIII Semester

Bachelor of Science (Honors/Research)

(Computer Science - Major)

Four Year (Eight Semester Degree Course)

Teaching and Examination Scheme

B.Sc. Sem-I (Computer Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Programming in 'C'	BCS1T01	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Programming in 'C'	BCS1P01	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Computer Fundamentals	BCS1T02	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Computer Fundamentals	BCS1P02	-	-	2	1	-	-	-	-	-	50	25
5	GE/OE	Refer GE/OE Basket	BGO1T01	2	-	-	2	3	80	20	40	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO1T02	2	-	-	2	3	80	20	40	-	-	-
7	VSC	Office Automation	BVS1P01	-	-	4	2	-	-	-	-	50	50	50
8	SEC	Refer SEC Basket	BVS1P02	-	-	4	2	-	-	-	-	50	50	50
9	AEC	English Compulsory	BAE1T01	2	-	-	2	3	50	50	40	-	-	-
10	VEC	Environmental Sci.	BVE1T01	2	-	-	2	3	80	20	40	-	-	-
11	IKS	Vedic Mathematics	BIK1T01	2	-	-	2	3	80	20	40	-	-	-
12	CC	Refer CC Basket	BCC1P01	-	-	4	2	-	-	-	-	-	100	50
Total				14	-	16	**22**		**530**	**170**		**150**	**250**	

B.Sc. Sem-II (Computer Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Object Oriented Programming using 'C ++'	BCS2T03	2	-	-	2	3	80	20	40	-	-	-
	DSC	Object Oriented Programming using 'C ++'	BCS2P03	-	-	2	1					25	25	25
2	DSC	Operating Systems	BCS2T04	2	-	-	2	3	80	20	40	-	-	-
	DSC	Operating Systems	BCS2P04	-	-	2	1	-	-	-	-	-	50	25
3	GE/OE	Refer GE/OE Basket	BGO2T03	2	-	-	2	3	80	20	40	-	-	-
4	GE/OE	Refer GE/OE Basket	BGO2T04	2	-	-	2	3	80	20	40	-	-	-
5	VSC	Computer Animation	BVS2P03	-	-	4	2	-	-	-	-	50	50	50
6	SEC	Refer SEC Basket	BVS2P04	-	-	4	2	-	-	-	-	50	50	50
7	AEC	Second Language	BAE2T02	2	-	-	2	3	50	50	40	-	-	-
8	VEC	Constitution of India	BVE2T02	2	-	-	2	3	80	20	40	-	-	-
9	IKS	Indian Astronomy	BIK2T02	2	-	-	2	3	-	-	-	50	50	50
10	CC	Refer CC Basket	BCC2P02	-	-	4	2	-	-	-	-	-	100	50
Total				14	-	16	**22**		**530**	**170**		**150**	**250**	

Exit option: Award of UG Certificate in Major with 40-44 credits and an additional 4 credits core NSQF course/ Internship ORContinue with Major and Minor

B.Sc. Sem-III (Computer Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Data Structures	BCS3T05	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Data Structures	BCS3P05	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Linux Operating System	BCS3T06	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Linux Operating System	BCS3P06	-	-	2	1	-	-	-	-	-	50	25
5	Minor	Minor 1 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
6	Minor	Minor 1 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
7	Minor	Minor 2 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
8	Minor	Minor 2 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
9	GE/OE	Refer GE/OE Basket	BGO3T05	2	-	-	2	3	80	20	40	-	-	-
10	VSC	Refer VSC Basket	BVS3P05	-	-	4	2	-	-	-	-	50	50	50
11	AEC	Second Language	BAE3T03	2	-	-	2	3	50	50	40	-	-	-
12	FP	Field Project	BFP3P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC3P03	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	**22**		**450**	**150**		**200**	**300**	

B.Sc. Sem-IV (Computer Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Java Programming	BCS4T07	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Java Programming	BCS4P07			2	1	-	-	-	-	25	25	25
3	DSC	Software Engineering	BCS4T08	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Software Engineering	BCS4P08			2	1	-	-	-	-	-	50	25
5	Minor	Minor 3 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
6	Minor	Minor 3 (Refer Minor Basket)				2	1	-	-	-	-	25	25	25
7	Minor	Minor 4 (Refer Minor Basket)		2	-		2	3	80	20	40	-	-	-
8	Minor	Minor 4 (Refer Minor Basket)				2	1	-	-	-	-	-	50	25
9	GE/OE	Refer GE/OE Basket	BGO4T06	2	-	-	2	3	80	20	40	-	-	-
10	SEC	Refer SEC Basket	BVS4T06	-	-	4	2	-	-	-	-	50	50	50
11	AEC	English Compulsory	BAE4T03	2	-	-	2	3	50	50	40	-	-	-
12	CEP	Community Service	BCM4P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC4P04	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	**22**		**450**	**150**		**200**	**300**	

Exit option; Award of UG Diploma in Major and Minor with 80-88 credits and an additional 4 credits core NSQF course/ Internship ORContinue with Major and Minor

B.Sc. Sem-V (Computer Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Advanced JAVA Programming	BCS5T09	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Advanced JAVA Programming	BCS5P09	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Database Management System	BCS5T10	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Database Management System	BCS5P10	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Data Communication and Networks	BCS5T11	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Data Communication and Networks	BCS5P11	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 1	BCS5T12	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 1	BCS5P12	-	-	2	1	-	-	-	-	-	50	25
9	Minor	Minor 5 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 5 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
11	Minor	Minor 6 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
12	Minor	Minor 6 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
13	VSC	Refer VSC Basket	BVS5P07	-	-	4	2	-	-	-	-	50	50	50
14	CEP	Community Service	BCM5P02	-	-	2	1	-	-	-	-	25	25	25
Total				**13**	**-**	**18**	**22**	**-**	**520**	**130**	**--**	**225**	**225**	**-**

B.Sc. Sem-VI (Computer Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Cyber Security	BCS6T13	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Cyber Security	BCS6P13	-	-	2	1	-	-	-	-	25	25	25
3	DSC	SQL and PL/SQL	BCS6T14	2	-	-	2	3	80	20	40	-	-	-
4	DSC	SQL and PL/SQL	BCS6P14	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Python Programming	BCS6T15	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Python Programming	BCS6P15	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 2	BCS6T16	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 2	BCS6P16	-	-	2	1	-	-	-	-	-	50	25
9	Minor	Minor 7 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 7 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
11	VSC	Refer VSC Basket	BVS6P08	-	-	4	2	-	-	-	-	50	50	50
12	OJT	Internship (Related to DSC)	BOJ6P01	-	-	8	4	-	-	-	-	100	100	100
Total				11	-	22	**22**		**440**	**110**		**275**	**275**	

Exit option: Award of UG Degree in Major with 120-132 credits OR Continue with Major and Minor

B.Sc. Sem-VII (Honors) (Computer Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Artificial Intelligence	BCS7T17	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Artificial Intelligence	BCS7P17	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Compiler Construction	BCS7T18	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Compiler Construction	BCS7P18	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Neural Network	BCS7T19	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Neural Network	BCS7P19	-	-	2	1	-	-	-	-	25	25	25
7	DSC	Data Mining	BCS7T20	2	-	-	2	3	80	20	40	-	-	-
8	DSC	Data Mining	BCS7P20	-	-	2	1	-	-	-	-	-	50	25
9	DSE	Elective 3	BCS7T21	3	-	-	3	3	120	30	60	-	-	-
10	DSE	Elective 3	BCS7P21	-	-	2	1	-	-	-	-	25	25	25
11	RM	Research Methodology	BCS7T22	2	-	-	2	3	80	20	40	-	-	-
12	RM	Research Methodology	BCS7P22	-	-	4	2	-	-	-	-	50	50	50
Total				13	-	14	**20**		**520**	**130**		**175**	**175**	

B.Sc. Sem-VIII (Honors) (Computer Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Cloud Computing	BCS8T23	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Cloud Computing	BCS8P23	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Machine Learning	BCS8T24	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Machine Learning	BCS8P24	-	-	2	1	-	-	-	-	-	50	25
5	DSC	R-Programming	BCS8T25	2	-	-	2	3	80	20	40	-	-	-
6	DSC	R-Programming	BCS8P25	-	-	2	1	-	-	-	-	25	25	25
7	DSC	Computer Graphics	BCS8T26	2	-	-	2	3	80	20	40	-	-	-
8	DSC	Computer Graphics	BCS8P26	-	-	2	1	-	-	-	-	-	50	25
9	DSE	Elective 4	BCS8T27	3	-	-	3	3	120	30	60	-	-	-
10	DSE	Elective 4	BCS8P27	-	-	2	1	-	-	-	-	25	25	25
11	OJT	Apprenticeship (Related to DSC)	BOJ8P02	-	-	8	4	-	-	-	-	100	100	100
Total				11	-	18	**20**		**440**	**110**		**225**	**225**	

Four Year UG Honours Degree in Major and Minor with 160-176 credits

B.Sc. Sem-VII (Research) (Computer Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Artificial Intelligence	BCS7T17R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Artificial Intelligence	BCS7P17R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Compiler Construction	BCS7T18R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Compiler Construction	BCS7P18R	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Neural Network	BCS7T19R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Neural Network	BCS7P19R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 3	BCS7T20R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 3	BCS7P20R	-	-	2	1	-	-	-	-	-	50	25
9	RM	Research Methodology	BCS7T21R	2	-	-	2	3	80	20	40	-	-	-
10	RM	Research Methodology	BCS7P21R	-	-	4	2	-	-	-	-	50	50	50
11	RP	Research Project/ Dissertation (Core)	BRP7P01	-	-	6	3	-	-	-	-	75	75	75
Total				11	-	18	**20**		**440**	**110**		**225**	**225**	

'R' in the subject code indicates 'Research'.

B.Sc. Sem-VIII (Research) (Computer Science - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min	SEE	CIE	Min
1	DSC	Cloud Computing	BCS8T22R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Cloud Computing	BCS8P22R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Machine Learning	BCS8T23R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Machine Learning	BCS8P23R	-	-	2	1	-	-	-	-	-	50	25
5	DSC	R-Programming	BCS8T24R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	R-Programming	BCS8P24R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 4	BCS8T25R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 4	BCS8P25R	-	-	2	1	-	-	-	-	-	50	25
9	RP	Research Project / Dissertation (Core)	BRP8P02	-	-	14	7 (4+2+1)	-	-	-	-	175	175	175
Total				09	-	22	**20**		**360**	**90**		**275**	**275**	

'R' in the subject code indicates 'Research'.

Four Year UG Honours with Research Degree in Major and Minor with 160-176 credits

Total Credits:

1. Three Year UG Degree Program: 132
2. Four Year UG Degree Program: 172

Abbreviations: 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

VSC Basket (Computer Science)

Semester	Course Category	Name of Course	BoS	Course Code
I	**VSC**	Office Automation	Computer Science	**BVS1P01**
II	**VSC**	Computer Animation	Computer Science	**BVS2P03**
III	**VSC**	Web design using HTML and DHTML	Computer Science	**BVS3P05**
V	**VSC**	Web Development using Java	Computer Science	**BVS5P07**
VI	**VSC**	Shell Programming	Computer Science	**BVS6P08**

Basket for <u>ELECTIVE</u> (DSE) Category Courses (Computer Science)

Semester	Course Category	Name of Course	Course Code
V	Elective 1	A. Web Technology	BCS5T12
		B. E-Commerce	
VI	Elective 2	A. ASP.NET	BCS6T16
		B. Embedded System	
VII (Honors)	Elective 3	A. Discrete Mathematics	BCS7T21
		B. Digital Electronics and Microprocessor	
VIII (Honors)	Elective 4	A. Computer Architecture and Organization	BCS8T27
		B. PHP	
VII (Research)	Elective 3	A. Data Mining	BCS7T20R
		B. Soft Computing	
VIII (Research)	Elective 4	A. Digital Image Processing	BCS7T25R
		B. Internet of Things	

'R' in the subject code indicates 'Research'.

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Scheme and Syllabus

Bachelor of Computer Application

Submitted by

Board of Studies,

Bachelor of Computer Application

FYUGP-Scheme I-VIII Semester
Bachelor of Computer Application (Honors/Research)
(Computer Application-Major)
Four Year (Eight Semester Degree Course)
Teaching and Examination Scheme

BCA Sem-I (Computer Application-Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Programming in 'C'	BCA1T01	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Programming in 'C'	BCA1P01	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Computer Fundamentals	BCA1T02	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Computer Fundamentals	BCA1P02	-	-	2	1	-	-	-	-	25	25	25
5	GE/OE	Refer GE/OE Basket	BGO1T01	2	-	-	2	3	80	20	40	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO1T02	2	-	-	2	3	80	20	40	-	-	-
7	VSC	Office Automation	BVS1P01	-	-	4	2	-	-	-	-	50	50	50
8	SEC	Refer SEC Basket	BVS1P02	-	-	4	2	-	-	-	-	50	50	50
9	AEC	English Compulsory	BAE1T01	2	-	-	2	3	50	50	40	-	-	-
10	VEC	Environmental Sci	BVE1T01	2	-	-	2	3	80	20	40	-	-	-
11	IKS	Vedic Mathematics	BIK1T01	2	-	-	2	3	80	20	40	-	-	-
12	CC	Refer CC Basket	BCC1P01	-	-	4	2	-	-	-	-	-	100	50
Total				14	-	16	**22**		**530**	**170**		**150**	**250**	

BCA Sem-II (Computer Application - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Object Oriented Programming using "C ++"	BCA2T03	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Object Oriented Programming using "C ++"	BCA2P03	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Operating Systems and Linux	BCA2T04	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Operating Systems and Linux	BCA2P04	-	-	2	1	-	-	-	-	25	25	25
5	GE/OE	Refer GE/OE Basket	BGO2T03	2	-	-	2	3	80	20	40	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO2T04	2	-	-	2	3	80	20	40	-	-	-
7	VSC	Computer Animation	BVS2P03	-	-	4	2	-	-	-	-	50	50	50
8	SEC	Refer SEC Basket	BVS2P04	-	-	4	2	-	-	-	-	50	50	50
9	AEC	Second Language	BAE2T02	2	-	-	2	3	50	50	40	-	-	-
10	VEC	Constitution of India	BVE2T02	2	-	-	2	3	80	20	40	-	-	-
11	IKS	Indian Astronomy	BIK2T02	2	-	-	2	3	-	-	-	50	50	50
12	CC	Refer CC Basket	BCC2P02	-	-	4	2	-	-	-	-	-	100	50
Total				14	-	16	**22**		**530**	**170**		**150**	**250**	

Exit option: Award of UG Certificate in Major with 40-44 credits and an additional 4 credits core NSQF course/ Internship ORContinue with Major and Minor

BCA Sem-III (Computer Application - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Data Structures	BCA3T05	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Data Structures	BCA3P05	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Java Programming	BCA3T06	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Java Programming	BCA3P06	-	-	2	1	-	-	-	-	25	25	25
5	Minor	Minor 1 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
6	Minor	Minor 1 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
7	Minor	Minor 2 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
8	Minor	Minor 2 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
9	GE/OE	Refer GE/OE Basket	BGO3T05	2	-	-	2	3	80	20	40	-	-	-
10	VSC	Refer VSC Basket	BVS3P05	-	-	4	2	-	-	-	-	50	50	50
11	AEC	Second Language	BAE3T03	2	-	-	2	3	50	50	40	-	-	-
12	FP	Field Project	BFP3P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC3P03	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	**22**		**450**	**150**		**200**	**300**	

BCA Sem-IV (Computer Application - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Advanced Java Programming	BCA4T07	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Advanced Java Programming	BCA4P07			2	1	-	-	-	-	25	25	25
3	DSC	Software Engineering	BCA4T08	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Software Engineering	BCA4P08			2	1	-	-	-	-	25	25	25
5	Minor	Minor 3 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
6	Minor	Minor 3 (Refer Minor Basket)				2	1	-	-	-	-	25	25	25
7	Minor	Minor 4 (Refer Minor Basket)		2	-		2	3	80	20	40	-	-	-
8	Minor	Minor 4 (Refer Minor Basket)				2	1	-	-	-	-	25	25	25
9	GE/OE	Refer GE/OE Basket	BGO4T06	2	-	-	2	3	80	20	40	-	-	-
10	SEC	Refer SEC Basket	BVS4T06	-	-	4	2	-	-	-	-	50	50	50
11	AEC	English Compulsory	BAE4T03	2	-	-	2	3	50	50	40	-	-	-
12	CEP	Community Service	BCM4P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC4P04	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	**22**		**450**	**150**		**200**	**300**	

Exit option; Award of UG Diploma in Major and Minor with 80-88 credits and an additional 4 credits core NSQF course/ Internship ORContinue with Major and Minor

BCA Sem-V (Computer Application - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min	SEE	CIE	Min.
1	DSC	Python Programming	BCA5T09	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Python Programming	BCA5P09	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Database Management System	BCA5T10	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Database Management System	BCA5P10	-	-	2	1	-	-	-	-	25	25	25
5	DSC	Data Communication and Networks	BCA5T11	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Data Communication and Networks	BCA5P11	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 1	BCA5T12	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 1	BCA5P12	-	-	2	1	-	-	-	-	25	25	25
9	Minor	Minor 5 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 5 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
11	Minor	Minor 6 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
12	Minor	Minor 6 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
13	VSC	Refer VSC Basket	BVS5P07	-	-	4	2	-	-	-	-	50	50	50
14	CEP	Community Service	BCM5P02	-	-	2	1	-	-	-	-	25	25	25
Total				**13**	**-**	**18**	**22**	**-**	**520**	**130**	**--**	**225**	**225**	**-**

BCA Sem-VI (Computer Application - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Cyber Security	BCA6T13	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Cyber Security	BCA6P13	-	-	2	1	-	-	-	-	25	25	25
3	DSC	SQL and PL/SQL	BCA6T14	2	-	-	2	3	80	20	40	-	-	-
4	DSC	SQL and PL/SQL	BCA6P14	-	-	2	1	-	-	-	-	25	25	25
5	DSC	Android Programming	BCA6T15	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Android Programming	BCA6P15	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 2	BCA6T16	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 2	BCA6P16	-	-	2	1	-	-	-	-	25	25	25
9	Minor	Minor 7 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 7 (Refer Minor Basket)		-	-	2	1	-	-	-	-	25	25	25
11	VSC	Refer VSC Basket	BVS6P08	-	-	4	2	-	-	-	-	50	50	50
12	OJT	Internship (Related to DSC)	BOJ6P01	-	-	8	4	-	-	-	-	100	100	100
Total				11	-	22	**22**		**440**	**110**		**275**	**275**	

Exit option: Award of UG Degree in Major with 120-132 credits OR Continue with Major and Minor

BCA Sem-VII (Honors) (Computer Application - Major)

S N	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Compiler Construction	BCA7T17	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Compiler Construction	BCA7P17	-	-	2	1	-	-	-	-	25	25	25
3	DSC	E-Commerce	BCA7T18	2	-	-	2	3	80	20	40	-	-	-
4	DSC	E-Commerce	BCA7P18	-	-	2	1	-	-	-	-	25	25	25
5	DSC	Data Mining	BCA7T19	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Data Mining	BCA7P19	-	-	2	1	-	-	-	-	25	25	25
7	DSC	Software Testing	BCA7T20	2	-	-	2	3	80	20	40	-	-	-
8	DSC	Software Testing	BCA7P20	-	-	2	1	-	-	-	-	25	25	25
9	DSE	Elective 3	BCA7T21	3	-	-	3	3	120	30	60	-	-	-
10	DSE	Elective 3	BCA7P21	-	-	2	1	-	-	-	-	25	25	25
11	RM	Research Methodology	BCA7T22	2	-	-	2	3	80	20	40	-	-	-
12	RM	Research Methodology	BCA7P22	-	-	4	2	-	-	-	-	50	50	50
Total				13	-	14	**20**		**520**	**130**		**175**	**175**	

BCA Sem-VIII (Honors) (Computer Application - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Cloud Computing	BCA8T23	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Cloud Computing	BCA8P23	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Blockchain Technology	BCA8T24	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Blockchain Technology	BCA8P24	-	-	2	1	-	-	-	-	25	25	25
5	DSC	Cryptography	BCA8T25	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Cryptography	BCA8P25	-	-	2	1	-	-	-	-	25	25	25
7	DSC	Embedded System	BCA8T26	2	-	-	2	3	80	20	40	-	-	-
8	DSC	Embedded System	BCA8P26	-	-	2	1	-	-	-	-	25	25	25
9	DSE	Elective 4	BCA8T27	3	-	-	3	3	120	30	60	-	-	-
10	DSE	Elective 4	BCA8P27	-	-	2	1	-	-	-	-	25	25	25
11	OJT	Apprenticeship (Related to DSC)	BOJ8P02	-	-	8	4	-	-	-	-	100	100	100
Total				11	-	18	**20**		**440**	**110**		**225**	**225**	

Four Year UG Honours Degree in Major and Minor with 160-176 credits

BCA Sem-VII (Research) (Computer Application - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Compiler Construction	BCA7T17R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Compiler Construction	BCA7P17R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	E-Commerce	BCA7T18R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	E-Commerce	BCA7P18R	-	-	2	1	-	-	-	-	25	25	25
5	DSC	Data Mining	BCA7T19R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Data Mining	BCA7P19R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 3	BCA7T20R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 3	BCA7P20R	-	-	2	1	-	-	-	-	25	25	25
9	RM	Research Methodology	BCA7T21R	2	-	-	2	3	80	20	40	-	-	-
10	RM	Research Methodology	BCA7P21R	-	-	4	2	-	-	-	-	50	50	50
11	RP	Research Project/ Dissertation (Core)	BRP7P01	-	-	6	3	-	-	-	-	75	75	100
Total				11	-	18	**20**		**440**	**110**		**225**	**225**	

'R' in the subject code indicates 'Research'.

BCA Sem-VIII (Research) (Computer Application - Major)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min	SEE	CIE	Min
1	DSC	Cloud Computing	BCA8T22R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Cloud Computing	BCA8P22R	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Blockchain Technology	BCA8T23R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Blockchain Technology	BCA8P23R	-	-	2	1	-	-	-	-	25	25	25
5	DSC	Cryptography	BCA8T24R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Cryptography	BCA8P24R	-	-	2	1	-	-	-	-	25	25	25
7	DSE	Elective 4	BCA8T25R	3	-	-	3	3	120	30	60	-	-	-
8	DSE	Elective 4	BCA8P25R	-	-	2	1	-	-	-	-	25	25	25
9	RP	Research Project / Dissertation (Core)	BRP8P02	-	-	14	7 (4+2 +1)	-	-	-	-	175	175	175
Total				09	-	22	**20**		**360**	**90**		**275**	**275**	

'R' in the subject code indicates 'Research'

Four Year UG Honours with Research Degree in Major and Minor with 160-176 credits

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Total Credits:

1. Three Year UG Degree Program: 132
2. Four Year UG Degree Program: 172

Abbreviations: 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

VSC Basket (Computer Application)

Semester	Course Category	Name of Course	BoS	Course Code
I	**VSC**	Office Automation	Computer Science	**BVS1P01**
II	**VSC**	Computer Animation	Computer Science	**BVS2P03**
III	**VSC**	Web design using HTML and DHTML	Computer Science	**BVS3P05**
V	**VSC**	Web Development using Java	Computer Science	**BVS5P07**
VI	**VSC**	Shell Programming	Computer Science	**BVS6P08**

Basket for ELECTIVE (DSE) Category Courses (Computer Application)

Semester	Course Category	Name of Course	Course Code
V	Elective 1	A. ASP.NET	BCA5T12
		B. Discrete Mathematical Structure	
VI	Elective 2	A. Web Technology	BCA6T16
		B. Statistical Methods	
VII (Honors)	Elective 3	A. Computer Graphics	BCA7T21
		B. Operation Research	
VIII (Honors)	Elective 4	A. Pattern Recognition	BCA8T27
		B. PHP	
VII (Research)	Elective 3	A. Soft Computing	BCA7T20R
		B. Machine Learning	
VIII (Research)	Elective 4	A. Cloud Computing	BCA7T25R
		B. Design and Analysis of Algorithm	

'R' in the subject code indicates 'Research'.

Bachelor of Computer Application (Honors/Research)
(Computer Application-Major)
Four Year (Eight Semester Degree Course)

The objectives of the Program

1. The primary objective of this program is to provide a foundation of computing principles for effectively using information systems and enterprise softwares.
2. It helps students analyze the requirements for system programming and exposes students for information systems
3. This programme provides students with options to specialize in various software system.
4. To produce outstanding Computer Scientists who can apply the theoretical knowledge into practice in the real world and develop standalone live projects themselves
5. To provide opportunity for the study of modern methods of information processing and its applications.
6. To develop among students the programming techniques and the problem solving skills through programming
7. To prepare students who wish to go on to further studies in computer science and related subjects.
8. To acquaint students to Work effectively with a range of current, standard, Office Productivity software applications

PROGRAMME SPECIFIC OUTCOMES (PSOs)

1. Discipline knowledge: Acquiring knowledge on basics of Computer Science and ability to apply to design principles in the development of solutions for problems of varying complexity
2. Problem Solving: Improved reasoning with strong mathematical ability to Identify, formulate and analyze problems related to computer science and exhibiting a sound knowledge on data structures and algorithms.
3. Design and Development of Solutions: Ability to design and development of algorithmic solutions to real world problems.
4. Programming a computer: Exhibiting strong skills required to program a computer for various issues and problems of day-to-day scientific applications.
5. Application Systems Knowledge: Possessing a minimum knowledge to practice existing computer application software.
6. Communication: Must have a reasonably good communication knowledge both in oral and writing.
7. Ethics on Profession, Environment and Society: Exhibiting professional ethics to maintain the integrality in a working environment and also have concern on societal impacts due to computer-based solutions for problems.
8. Lifelong Learning: Should become an independent learner. So, learn to learn ability.
9. Motivation to take up Higher Studies: Inspiration to continue educations towards advanced studies on Computer Science.

Est : 1984

Village Uplift Society's

ANNASAHEB GUNDEWAR COLLEGE

GUNDEWAR MARG, CHHAONI, KATOL ROAD, NAGPUR - 440 013. (M.S.) INDIA

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ISO 9001 : 2015 Certified

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Principal

(O) 0712-2591008
Fax : 0712-251735

Date : 14.06.2023

Ref. No. .....

Annasaheb Gundewar College, Nagpur

Academic Calendar/Planning

2023-2024

Sr.	Particular	Period
1.	First Term	16.06.2023 to 31.10.2023
2.	Winter Vacation	01.11.2023 to 30.11.2023
3.	Second Term	01.12.2023 to 30.04.2024
4.	Summer Vacation	02.05.2024 to 15.06.2024

June, 2023

S.N.	Activity/Program	Organise Department/Committee	Tentative Date
1	Reopening of College	-	16th June, 2023
2	Birth Anniversary of Rajshri Shahu Maharaj	Program Organising Committee	26th June, 2022
4	College Foundation Day	Program Organising Committee	28th June, 2022
5	Weekly/Monthly/Annual Planning of Teaching	Academic Planning Committee	Last week of Jurte, 2023
6	Meeting & Annual Planning of NAAC Criteria Committee	IQAC	28th June, 2023

July, 2022

S. N.	Activity/Program	Organise Department/Committee	Tentative Date
2.	Admission Starts- B. A., B. Com., B.Sc., M.A. & M. Com.	Admission Committee	July, 2023
2	Students' Counselling	Admission Committee	July, 2023

August, 2023

S. N.	Activity/Program	Organise Department/Committee	Tentative Date
1	Extension /NSS Activities	NSS	First or Second

			Week
1	Birth Anniversary of Sahityaratna Lokshahir Annabhau Sathe	Program Organising Committee	1st August, 2023
2	Birth Anniversary of Krantisinh Nana Patil	Program Organising Committee	3rd August, 2023
3	Bridge Course	Subject wise	First or Second Week
4	Extension Activities	NSS/Academic Committees	Second and Third Week
4	Kranti Din	History	9th August, 2023
	Beyond Campus Environmental Initiative (Extension Activities)	NSS/ Academic Committees	Third week of August.
5	Library Day- Birth Anniversary of S. R. Ranganathan	Library & Information Centre	13th August, 2023
6	Independence Day	College Programme	15th August, 2023
7	Sadbhavana Diwas- Birth Anniversary of Rajiv Gandhi	Program Organising Committee	20th August, 2023
	IQAC Meeting	IQAC	27th of August
8	National Sports Day- Birth Anniversary of Major Dhyanchand	Department of Sports	29th August, 2023

September, 2023

S. N.	Activity/Program	Organise Department/Committee	Tentative Date
1	Students Governance Programme-Teachers Day-Birth Anniversary of Sarvepalli Radhakrishnan	Program Organising Committee	First week of th September.
	Seminar/lecture on Competitive Examination and placement of students.	Competitive Examination Cell/ Employment Guidance Cell	First week of th September
2	Birth Anniversary of Adya Krantiveer Raje Umaji Naik	Program Organising Committee	7th September, 2023
3	International Literacy Day	Department of Life Long & Extension	8th September, 2023
5	Class Seminar & Group Discussion	All Department	First Week of September
	Extension Activities	NSS/ Academic Committees	First Week of September
6	N. S. S. Day	National Service Scheme (NSS)	24th September, 2023
	Orientation for NSS Volunteers	NSS	Last week of Sept.
7	Death Anniversary of Loknete Annasaheb Gundewar	Program Organising Committee	29th September, 2023
8	Birth Anniversary of Raobahadur D. Lakshiminarayan	Program Organising Committee	30th September, 2023

October, 2023

S. N.	Activity/Program	Organise Department/Committee	Tentative Date
1	Extension Activities -Cleanness Drive-Swachata Abhiyan -Birth Anniversary of Mahatma Gandhi	National Service Scheme (NSS)	First week of October,2023
2	Birth Anniversary of Lal Bahadur Shastri	National Service Scheme (NSS)	2nd October, 2023
3	Vachan-Prerana Diwas & Quotes Explanation Competition- Birth Anniversary of A. P. J. Abdul Kalam	Library & Information Centre	15th October, 2023
4	Birth Anniversary of Maharishi Valmiki	Program Organising Committee	20th October, 2023
5	Workshop on Personality Development.	IQAC Department	First Week
7	National Unity Day/Rashtriya Ekata Diwas- Birth Anniversary of Sardar Vallabhbhai Patel	National Service Scheme (NSS)	31st October, 2023
8	National Pledge Day/Rashtriya Sankalp Diwas- Death Anniversary of Indira Gandhi	National Service Scheme (NSS)	31st October, 2023
9	Human Trafficking Awareness Lecture and Rally.	NSS/Academic Committees	Second and fourth week
10	Pre semester Exam	All Departments Last Week of Oct, 2023	Last Week of Oct, 2023
11	Capacity Building Programme/Collaboration Activities	IQAC/Academic Collaboration and Linkages Cell	Last Week of Oct, 2023

November, 2023

S. N.	Activity/Program	Organise Department/Committee	Tentative Date
1	Examination Work	All Departments	1/11/23 to 30/11/23
2	National Education Day- Birth Anniversary of Maulana Abul Kalam Azad	Program Organising Committee	11th November, 2023
3	Birth Anniversary of Pandit Jawaharlal Neharu	Program Organising Committee	14th November, 2023
4	Birth Anniversary of Jananayak Birasa Munda	Program Organising Committee	15th November, 2023
6	National Integration Day/Rashtriya Ekatmata Diwas- Birth Anniversary of Indira Gandhi	Program Organising Committee	19th November, 2022
	IQAC Meeing	IQAC	24th of November 23.
7	Constitution Day	National Service Scheme (NSS)	26th November, 2022

December, 2023

S. N.	Activity/Program	Organise Department/Committee	Tentative Date
1	Extension Activities	Academic Committees	First week of Dec.
1	Mahaparinirvan Diwas- Death Anniversary of Dr. Babasaheb Ambedkar- Various activities like essay writing ,quiz etc.	Program Organising Committee	6th December, 2023 Second week of Dec,23
2	Birth Anniversary of Sant Jagnade Maharaj	Program Organising Committee	8th December, 2023
3	International Human Rights Day and activities	National Service Scheme (NSS) & Department of Political Science	10th December, 2023
4	Birth Anniversary of Dr. Panjabrao Deshmukh	Program Organising Committee	27th December, 2023

January, 2024

S. N.	Activity/Program	Organise Department/Committee	Tentative Date
1	Birth Anniversary of Krantijyoti Savitaribai Fule	Program Organising Committee	3rd January, 2024
3	Cultural Festival- Yuvarang	Cultural Department	First Week
4	Blood Donation & Health Check-up Camp	National Service Scheme (NSS)	10th January, 2024
5	Birth Anniversary of Karmveer Dadasaheb Kannamwar	Program Organising Committee	10th January, 2024
6	Birth Anniversary of Rajamata Jijabai Masaheb	Program Organising Committee	12th January, 2024
7	National Youth Day-Birth Anniversary of Swami Vivekanand	National Service Scheme (NSS)	12th January, 2024
8	Marathi Bhasha Sanvardhan Pandharwada	Department of Marathi	14th to 28th January, 2024
9	FDP/Workshop on IPR	Dept.of Library Science	Last week of January
9	Birth Anniversary of Subhash Chandra Bose Parakram Din	Department of Library	23rd January. 2024
10	National Voters Day- Voters Awareness Programme and activities.	NSS/Department of Political Science	25th January, 2024
11	Republic Day	College	26th January, 2023
12	Marathi Bhasha Gaurav Din and activities	Department of Marathi	27th January, 2024

February, 2024

S. N.	Activity/Program	Organise Department/Committee	Tentative Date
1	N.S.S.Special Camp	Department of N.S.S.	First Week of February
3	Birth Anniversary of Sant Sewalal Maharaj	Program Organising Committee	15th February, 2023
4	Birth Anniversary of Chatrapati Shivaji Maharaj	Department t of History	19th February, 2023
5	Birth Anniversary of Sant Gadgebaba	Program Organising Committee	23th February, 2023
6	Parents-Teacher & Alumni Meeting	Alumni & Parents Teacher Coordination Committee	First Week
7	UNI Connect App Workshop	IQAC	Last week of Feb.24

March, 2024

S. N.	Activity/Program	Organise Department/Committee	Tentative Date
1	Guest Lecture	All Departments	First and Second Week
2	Gender Sensitivity Program	Girls Guidance Committee	Third week of March
3	Cultural Festival- Yuvarang	Cultural Department	Last week Week
4	Birth Anniversary of Yashwantrao Chawhan	Program Organising Committee	12th March, 2023
	Water conservation program	Green Club	Second Week of March
6	Research Methodology/ Entrepreneurship workshop	FDP Cell	Third week of March
6	Cultural Festival- Yuvarang	Cultural Department	Last week Week
7	Shahid Din	Program Organising Committee	23rd March, 2023
8	Field Visit	Various Departments.	Last week of March

April, 2024

S. N.	Activity/Program	Organise Department/Committee	Tentative Date
1	NEP Workshop on New Education Policy:2020	IQAC/NEP Cell	First Week of April
2	Essay competition on Indian Constitution	Dept. of Pol.Science/ Competitive Examination Cell	Second Week of April
2	Birth Anniversary of Dr. Babasaheb Ambedkar	Programme Organizing Committee and Backward Class Committee	14th April, 2024
	Essay competition on Dr.B.R.Ambedkar	IQAC/NEP Cell	Third week of April
3	Birth Anniversary of Rastrasant Tukadoji Maharaj	Program Organising Committee	30th April, 2024
4	IQAC Meeting	IQAC	Last week of April 24

Summer Vacation 02May, 2024 to 15th June, 2024

Total working days and total teaching days of the year 2023-2024

Month	Working Days	Teaching Days
June 23	12	NIL
July 23	25	25
August 23	25	24
September 23	21	21
October 23	25	25
November 23	Winter Vacation	Winter Vacation
December 23	26	26
January 24	25	24
February 24	25	25
March 24	23	23
April 24	23	23
May 24	01	NIL

Principal
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