SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE

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PART- ONE

Thursday, the 5th December, 2024

DIRECTION

No. :107/2024. Date : 05/12/2024.

Subject : Examinations leading to the Multi-disciplinary Degree of Bachelor of Computer Application (B.C.A) Major in… Minor in… (Three Years – Six Semesters Degree Course) and B.C.A (Honors) or Honors with Research (Four Years – Eight Semesters Degree Course) under National Education Policy-2020.

Whereas, Ordinance No. 17 of 2003 and Direction No.66/2023 dated 17 /10/2023 with respect to an examination leading to the Degree of Bachelor of Computer Application (Three Years – Six Semesters Degree Course) are in existence in the University,

AND

Whereas, the Government of India has set up multi stakeholder task force for National Education Policy – 2020 Task Force (NEPTF) on 27/02/2015,

AND

Whereas, the Government of Maharashtra has issued resolution No.**अभ्यास-२०१५/प्र.क्र.६११/विशि-३, दिनांक ३१ ऑक्टोबर, २०१५**for constitution of Task Force for designing the policy for implementation of NEP-2020,

AND

Whereas, the Government of Maharashtra has constituted a Task Force as per G.R. No. संकीर्ण-२०१५/प्र.क्र. १७६/विशि-३, दिनांक १६ ऑक्टोबर, २०२० by the Cabinet for preparation of road map for the implementation of NEP-2020,

AND

Whereas, the Report of the Task Force has been prepared on 30/06/2021 and approved by the Cabinet of Government of Maharashtra on 22/01/2022,

AND

Whereas, the Government of Maharashtra has issued the Resolution No.एनइपी-२०२२/प्र.क्र.१०५/विशि-३, दिनांक ६/१२/२०२२ andएनइपी-२०२२/८६७/२३/तांशि-२, दिनांक ०४/०७/२०२३ for credit framework,

AND

Whereas, the Government of Maharashtra has issued the Resolution No. एनइपी-२०२२/प्र.क्र.०९/विशि-३, शिकाना, दिनांक २६/१२/२०२२, दिनांक २०/०४/२०२३, दिनांक १६/०५/२०२३, दिनांक ०४/०७/२०२३, दिनांक १६/०६/२०२३, दिनांक २५/०१/२०२४, दिनांक १३/०३/२०२४ आणि ०२/०७/२०२४for implementation of NEP for Under Graduate and Post Graduate Programmes,

AND

Whereas, a joint meetings of all the Pro-Vice Chancellors and the Deans were held with steering Committee at Pune on 23rd and 24th January, 2023,

AND

Whereas, as per the letter from the Government, a workshop of all the Principals and Nodal Officers were held with the Steering Committee on 21/02/2023 in the University,

AND

Whereas, as per the instructions of Government of Maharashtra, Hon'ble Pro-Vice Chancellor has constitute a 13 member Committee under his Chairmanship to formulate the Teaching, Learning, Examination and Evaluation Scheme and Draft Provisions for Direction/Ordinance as per the National Education Policy- 2020 on 28/02/2023,

AND

Whereas, the Committee has proposed the Draft Scheme of Teaching, Learning, Examination and Evaluation and Draft Provisions of Ordinance/Direction,

AND

Whereas, as per the instructions given by the Director, Higher Education, Pune Region, Pune a joint meeting of the Principals of 20 colleges & the Deans of the Faculties, and passed the resolution on 07/04/2023,

AND

Whereas, a Joint meeting of all the Principals, the Deans of the Faculties with the Joint Director, Higher Education, Amravati Region, Amravati on the resolutions which have been passed during 07/04/2023 regarding the workload and the same has been placed on 17/04/2023,

AND

Whereas, joint meeting of the Deans of the Faculties along with the members of Steering Committee were held on 15/06/2023 at Mumbai,

AND

Whereas, as per letter क्रमांक-युएनआय/(१३६/२२)/विशी-१/भाग-३- १७९९ दिनांक १८ मार्च, २०२४, a Committee is constituted for the Draft Scheme of Teaching, Learning, Examination & Evaluation and Draft provisions for Ordinance/ Direction.

AND

Whereas, a series of meetings of the said Committee were held and a Draft Report is prepared inclusive Scheme of Teaching, Learning, Examination and Evaluation and Provision of Ordinance/Direction,

AND

Whereas, Draft Report is then placed before the Faculty of Science and Technology on 22/04/2024 and, the draft Report was then recommended to the Academic Council,

AND

Whereas, the Draft Report was then approved under section 12(7) of the Maharashtra Public Universities Act, 2016

AND

Whereas, the Draft Report was then placed before the Board of Studies meeting held in the month of July for the preparation of Syllabi and the Scheme of Teaching, learning, Examination and Evaluation underNational Education Policy- 2020,

AND

Whereas, the Draft syllabi framed by the various Board of Studies under the Faculty of Science and Technology were placed before the Faculty of Science and Technology on 09/07/2024, faculty accepted and recommended the draft syllabi to AcademicCouncil,

AND

Whereas, the Scheme of Teaching, Learning, Examination and Evaluation along with thedraft syllabiof various Under Graduate programme were approved under section 12(7) of Maharashtra Public Universities Act, 2016 on behalf of Academic Council,

AND

Whereas, the Final Report was then placed before the Monitoring Committee on 13/07/2024, 16/07/2024 and 31/07/2024 which was formed by the Faculty of Science and Technology,

AND

The revisions suggested by the Monitoring Committee were then placed before the Regular meeting of Academic Council 30/08/2024 and Academic Council approved the recommendations of Monitoring Committee,

AND

Whereas, the Board of Studies in Computer Science has prepared the syllabus and Scheme of implementation of B.C.A programme as per AICTE guidelines and submitted on 28.10.2024 and further recommend it to the Faculty of Science & Technology & Academic Council,

AND

Whereas, The Hon'ble Vice-Chancellor approved the recommendation of B.O.S. under Section 12(7) M.P.U.Act. 2016 on behalf of Faculty of Science & Technology& Academic Council on 22.11.2024,

AND

Whereas, the Scheme of Teaching, Learning, Examination and Evaluation has to be regulated by making an Ordinance,

AND

Whereas making an Ordinance is a time consuming process, Hence it is necessary to issue a Direction under section 12 (8) of the Maharashtra Public Universities Act, 2016,

Now, therefore I, Dr. Milind Barhate, Vice-Chancellor, SantGadge Baba Amravati University, Amravati in exercise of powers conferred upon me under Sub-section (8) of Section 12 of the Maharashtra Public Universities Act, 2016 do hereby direct as under-

1. i) This Direction may be called, "Examinations leading to the Multi-disciplinary Degree of Bachelor of Computer Application(B.C.A) Major in… Minor in… (Three Years – Six Semesters Degree Course) and B.C.A. (Honors) or Honors with Research (Four Years – Eight Semesters Degree Course) under National Education Policy-2020"

ii) This Degree shall belong to the Faculty of Science & Technology.

2. This direction shall come into force from the Academic Session as follows :-

i) Semester I and II from the Academic Session – 2024-2025.
ii) Semester III and IV from the Academic Session – 2025-2026.
iii) Semester V and VI from the Academic Session – 2026-2027.
iv) Semester VII and VIII from the Academic Session – 2027-2028

3. The provisions of directions, eligibility criteria and other details are as follows and the Schemes of Teaching, Learning, Examination and Evaluation of semester – I and semester-VIII are appended herewith vide **Annexure – A1 to A16.**

Annexure-1

NEP Implementation:

Applicability: This scheme shall be applicable to the undergraduate Programmes Bachelor of Computer Application (BCA) in the faculty of Science & Technology

In the BCA, two streams offered by university. Student may choose one of them at the time of admission in the First year.

- 101 Artificial Intelligence and Machine Learning
- 102 Data Science

Implementation Year

First Year (Semester I & II)	:	2024-25
Second Year (Semester III & IV)	:	2025-26
Third Year (Semester V & VI)	:	2026-27
Fourth Year (Semester VII & VIII)	:	2027-28

General Course Structure & Theme

A. Definition of Credit:

1 Hr. Lecture (L) per week	1 Credit
1 Hr. Tutorial (T) per week	1 Credit
1 Hr. Practical (P) per week	0.5 Credit
2 Hours Practical (P) per week	1 Credit

B. Course code and definition:

Course code	Definitions
L	Lecture
T	Tutorial
P	Practical
CC	Core Courses
AEC	Ability Enhancement Courses
MDE	Multi-Disciplinary Elective course
VAC	Value added Courses
SEC	Skill Enhancement courses
DSE	Discipline Specific Elective
OE	Open Elective

Course Name: Bachelor in Computer Application, Bachelor in Computer Application (Honours)

Course Level/Duration/System:

Undergraduate / Three or Four years/6 or 8 Semesters with multiple entry and exit.

The following option will be made available to the students joining BCA Research Program:

a. One year: Under Graduate Certificate in Computer Application
b. Two years: Under Graduate Diploma in Computer Application
c. Three years: Bachelor in Computer Application (BCA)
d. Four years: Bachelor in Computer Application with Honours: BCA (Honours) or Bachelor in Computer Application Honours with Research: BCA (Honours with Research)

Minimum Eligibility Criteria:

Eligibility for admission to Three-year BCA UG Program in the faculty of Science & Technologywill be as follows:

- The Students passing H.S.C. Examination with Science stream OR

a. The Students passing three years Diploma course in Computer Engg. / Electronics Engg. OR
b. 10+2 level minimum competency vocational course in Computer Technology / Electronics Technology.

Minimum eligibility criteria for opting the course in the fourth year will be as follows:

1. BCA (Honours with Research): BCA Degree
2. For BCA (Honours): BCA Degree

Note : The students who are eligible for BCA (Honours with Research) shall have choice to pursue either BCA (Honours) or BCA (Honours with Research).

The fourth year of Four-year UG programme

The fourth year of the Four-year UG programmewill 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 of 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 / recognized 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 honors program in other Colleges shall be evolved by the University separately.

Semester Wise Credit Distribution:

Semester Wise Credit Distribution of Proposed BCA, [BCA (Honours) And BCA (Honours With Research)] Program:

Semester	CoreCourses	AbilityEnhancementCourses	Multi-DisciplinaryElective course	Valueadded Courses	Skill Enhancementcourses	DisciplineSpecificElective	Total
I	8	2	2	2	5	-	19
II	12	-	-	2	7	-	21
III	11	0	0	2	4	3	20
IV	15	0	0	0	2	3	20
V	0	0	0	0	6	15	21
VI	4	1	0	0	4	10	19
BCA(Honours)							
VII	5	0	3	0	4	8	20
VIII					8	12	20
BCA(HonourswithResearch)							
VII	12					8	20
VIII	20						20

Category-wisedistribution*

Description	CoreCourses	AbilityEnhancementCourses	Multi-DisciplinaryElectivecourse	ValueaddedCourses	SkillEnhancement courses	Discipline SpecificElective	Total
BCA	50	3	2	6	28	31	120
BCA (Honours)	55	3	5	6	40	51	160
BCA (Honours with Research)	82	3	2	6	28	39	160

3YearsBCAProgram	**TotalCredits=120**
4YearsBCA(Honours)andBCA(Honourswith Research)	**TotalCredits=160**

Note: Students can take extra credit course from their own department or from other department as per the Admitting Body / University norms.

After Year 1, Students are advised to take Social Responsibility &CommunityEngagement-encompassingCommunityEngagementwithanNGOinthevacationtime.

An Under Graduate Certificate in Computer Application will be awarded,if a studentWishesto exit at the end of First year.

ExitCriteriaafterFirstYearofBCAProgramme:

Students will have the option to exit the Bachelor of Computer Application (BCA) program after successfully completing the first year. Upon exit, they will be awarded a UG Certificate in Computer Application. To be eligible for this certificate, students must complete an additional 04 credits in one of the following areas:

1. **Skill-Based Subject**: A course designed to enhance practical and technical skills in the field of computer applications.

2. **Work-Based Vocational Course**: A vocational course offered during the summer term that emphasizes hands-on training and workplace readiness.

3. **Internship/Apprenticeship**:A professional internship or apprenticeship program in a relevant field, with a minimum duration of 08 weeks, which will take place after the second semester.

4. **Social Responsibility & Community Engagement**:
   Active engagement with an NGO or community organization for a minimum duration of 08 weeks, focusing on real-world problem-solving, social responsibility, and community service.

   The mode and specifics of these additional credits will be determined by the respective University/Admitting Body, and students will be required to complete the 08-week program during the summer term following their second semester.

   The exiting students will clear the subject / submit the Internship Report as per the University schedule.

   Re-entry Criteria in to Second Year (Third Semester):
   The student who takes an exit after one year with an award of certificate may be allowed to re-enter in to Third Semester for completion of the BCA Program as per the respective University /Admitting Body schedule after earning requisite credits in the First year.

Note:

1. At the end of the Fourth Semester every student shall undergo Summer Training/ Internship / Capstone for Eight Weeks in the industry/Research or AcademicInstitute. This component will be evaluated during the fifth semester.
2. An Under Graduate Diploma in Computer Application will be awarded, if a student wishes to exit at the end of Second year.

Exit Criteria after Second Year of BCA Programme:

Students will have the option to exit the Bachelor of Computer Application (BCA) program after successfully completing the second year. Upon exit, they will be awarded a UG Diploma in Computer Application. To be eligible for this diploma, students must complete an additional 04 credits in one of the following areas:

1. **Skill-Based Subject**: A specialized course aimed at enhancing technical and practical expertise in computer applications.
2. **Work-Based Vocational Course**: A vocational course offered during the summer term, focused on building practical, industry-relevant skills.
3. **Internship/Apprenticeship**:A professional internship or apprenticeship with a minimum duration of 08 weeks, conducted after the fourth semester, offering hands- on experience in a relevant field.
4. **SocialResponsibility &CommunityEngagement**: Involvement with an NGO or community-based organization for a minimum of 08 weeks, contributing to social initiatives and applying computer application knowledge to solve real-world challenges.
5. **CapstoneProject**:Completion of a capstone project integrating the skills and knowledge gained during the first two years of the program, which can be an independent or group project.

The specific mode of completing the additional credits will be decided by the respective University/Admitting Body, and students will be required to complete the 08-week program or project during the summer term following their fourth semester.

Students opting for this exit will also be required to submit an Internship/Apprenticeship Report or complete the Capstone Project as per the schedule outlined by the University/Admitting Body before they are awarded the UG Diploma.

Re-entry Criteria in to Third Year (Fifth Semester):

The student who takes an exit after second year with an award of Diploma may be allowed to re-enter into fifth Semester for completion of the BCA Program as per therespective University / Admitting Body schedule after earning requisite credits in the Second year.

Bachelor In Computer Application Degree will be awarded, if a student wishes to exit at the end of Third year.

Exit Criteria after Third Year of BCA Programme

The students shall have an option to exit after 3rd year of Computer Application Program and will be awarded with a Bachelor's in Computer Application.

Re-entry Criteria in to Fourth Year (Seventh Semester)

The student who takes an exit after third year with an award of BCA may be allowed to re-enter in to Seventh Semester for completion of the BCA (Honours) or BCA (Honours with Research) Program as per the respective University / Admitting Body schedule after earning requisite credits in the Third year.

Enrollment and Registration of Students on ABC

Creation of ABC ID: Credits awarded to a student from one program from an institution may be transferred/ redeemed by another institution upon the students consent through ABC. Therefore, it is essential to all students to enroll on ABC, Create ABC ID and share ABC ID with academic institution where he/she admitted.

Credit Transfer Mechanism: Credit Transfer Mechanism comprising of Credit Accumulation, Credit Recognition, Credit Redemptionand Credit Transfer shall be as prescribed.

Examination and Assessment Process:

i. The basic principle of the Credit framework is that Credits are a function of the successful completion of a program of study/ vocational education/ training and assessment. No Credit can be earned by the student unless the student is assessed for the achievement of the desired competencies and outcome of a program.

ii. Exit options are provided with Certificate, Diploma and Basic Bachelor's degrees to the students at the end of the second, fourth and sixth semesters of a Four Years Multidisciplinary Degree Programme. Students will receive a Bachelor's degree with Honors/ Research on successfully completing of all eight semesters of the UG Program either at a stretch or with opted exits and re-entries.

iii. For the smooth success of four-year degree programme with multiple entry and exit systems, the examination mode should be based on the combination of innovative trends in formative (informal and formal tests administered during the learning process) and summative (evaluation of students learning at the end of an instructional unit) examination modes in line with the UGC Report on 'Evaluation Reforms in Higher Educational Institutions (2019).

Examination, Evaluation and Assessment Scheme

Continuous Assessment Tests (CAT)

For internal assessment, the Continuous Assessment Tests (CAT) shall be conducted as under-

i. Three CAT each of 8 / 10 Marks (Theory) as applicable and 10 Marks (Practical).
   - First on completion of 25% Syllabus of the course or on completion of 25 teaching days,
   - Second on completion of 50% Syllabus of the course or on completion of 50 teaching days,
   - Third on completion of 75% Syllabus of the course or on completion of 75 teaching days.

ii. Each concurrent assessment (CAT-I, II & III) will be mapped to relevant Course Learning Outcome.

iii. Total Performance in CAT (i.e.40 %) shall be based on the **best two out of three**inCAT examinations

iv. Internal assessment (CAT) shall be carried out by the respective course teacher by choosing variety of assessment tools/methods such as class test, record book, seminar, case study, field work, mini project work, quiz or any innovative method, which may be deemed to be appropriate for assessing the relevant course outcome.

Conduction of the Examination:

As per the scheme of teaching, learning, examination and evaluation, theory/practicalexaminations of Semester-I, II, III, IV, V, VI, VII and VIII shall be conducted by the University (except for Internal Examinations as applicable) at the end of each semester.

The theory/practical examinations of all the Semesters shall be held as per the followingSchedule–

Sr.No.	Name of the Examination	End Sem Examination	Supplementary Examination*
1	Semester-I, III, V and VII	Winter	Summer
2	Semester-II, IV, VI and VIII	Summer	Winter

*The University may evolve mechanism for conducting repeat end semester examination. Such repeat examinations shall have to be conducted within one month of the regular even semester examination and on demand examination.

1. The practical examination of all semesters shall be conducted by the University at the end of each semester. The HEI shall conduct the Practicalexamination of odd semesters as per the schedule announced by the University. **However, the appointment of the External and Internal Examiners shall be done by the Head or Principal of respective HEIto conduct external examination of the odd semester and the same should be communicated to the University before commencement of the practical examination.**The University shall conduct the external practical examination of all even semester by appointing external and internal examiners.

2. The examinations specified above shall be held twice in a year at such places and on such dates as may be prescribed by the University.
3. An applicant to an examination specified above, shall pursue a regular course of study in courses prescribed for the examination concerned for not less than one semester in a particular semester in a College/Institute/University department.
4. Provided that the student shall be eligible to appear for examination if -
   a. He/she complies with the provisions of the Ordinance pertaining to the Examination in general from time to time.
   b. He/she has prosecuted a regular course of study in a university department/college affiliated to the University.
   c. He/she has in the opinion of the Principal shown satisfactory progress in his/her studies.
5. The provisions of Ordinance No. 6 and Ordinance No. 9 shall be *mutatis-mutandis* applicable to every collegiate/non-collegiate student.
6. The fees for each theory examination and practical examination conducted by the university shall be as prescribed by the University, from time to time.

Computation of SGPA and CGPA

MappingofMarkstoGrades

Each course (Theory/Practical) is to be assigned 100 marks, irrespective ofthe number of credits, and the mapping of marks to grades may be done as per the following table:

Range of Marks	Assigned Grade
91-100	AA/A+
81-90	AB/A
71-80	BB/B+
61-70	BC/B
51-60	CC/C+
46-50	CD/C
40-45	DD/D
< 40	FF/F (Fail due to less marks)
-	FR (Fail due to shortage of attendance and therefore, torepeat the course)

Letter Grades and Grade Points:

Computation of SGPA and CGPA shall be on the basis of Credits prescribed to Courses and Grade Points obtained by the student based on scale as mentioned in table:

Table: Letter Grades and Grade Points

Semester GPA/ Program CGPA Semester/Program	**% of Marks**	**Alpha-Sign / Letter Grade Result**	**Grade Point**
9.00-10.00	91-100	AA/A+	10
8.00-<9.00	81-90	AB/A	9
7.00-<8.00	71-80	BB/B+	8
6.00-<7.00	61-70	BC/B	7
5.50-<6.00	51-60	CC/C+	6
5.00-<5.50	46-50	CD/C	5
4.00-<5.00	40-45	DD/D	4
Below 4.00	Below 40	FF/F (Fail due to less marks)	0
Ab (Absent)	Ab	Ab	0

Computation of SGPA and CGPA

The Semester Grade Point Average (SGPA) is computed from the grades as a measure of the student's performance in a given semester. The SGPA is based on the grades of the current term, while the Cumulative Grade Point Average (CGPA) is based on the grades in all courses taken after joining the programme of study.

Semester Grade Point Average (SGPA) The SGPA is the ratio of the sum of the product of the number of Credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of Credits of all the courses undergone by a student, i.e.

SGPA (Si) = $\sum$(Ci x Gi) / $\sum$Ci

Where Ci is the number of Credits of the i^{th} course and Gi is the grade point scored by the student in the i^{th} course.

Equivalence of the conventional division/class

Equivalence of the conventional division/class to the correspondingC.G.P.A. in final semester shall be inaccordance with the table

Table: Equivalence of Class/Division to C.G.P.A.

Sr. No.	C.G.P.A.	Class/Division
1.	7.5 or more than 7.5	First Class with Distinction
2.	6.00 or more but less than or equal to 7.49	First Class
3.	5.50 or more butless than or equal to 5.99	Higher Second Class
4.	5.00 or more but less than or equal to 5.49	Second Class
5.	4.00 or more but less than or equal to 4.99	Pass

Declaration of Results:

1. Declaration of result is based on the Semester Grade Point Average (SGPA) earned towards the end of each semester or the Cumulative Grade Point Average (CGPA) earned at the completion of all eight semesters of the programme and the corresponding overall alpha-sign or letter grades as given in Table. If some candidates exit at the completion of the first, second or third year of the Four years Undergraduate Programmes, with Certificate, Diploma or Basic Degree, respectively, then the results of successful candidates at the end of the second, fourth, sixth and eighth semesters shall also be classified on the basis of the CGPA obtained in the two, four, six or eight semesters, respectively.
2. A student obtaining Grade F shall be considered failed and will be required to reappear in the examination. Based on the above recommendations on Letter grades, grade points and SGPA and CGPA, the University shall issue the transcript for each semester and a consolidated transcript indicating the performance in all semesters.

Award of Degree:

1. A student pursuing Three Year / Four Year UG programme shall be awarded an appropriate Honors/ Research degree in Major/ Core Subject on completion of VIII Semester with the minimum of 160 Credits if he secures in that Subject at least 50% of the total Credits for that programme. He shall thus study the specific number of Mandatory Core Courses, Core Electives, Vocational and Skill Courses and Field projects/ Internships connected to Core Subjects in eight semesters, so as to cover at least 50% of the total Credits.
   University Three-Year Degree Completion Conditions: In order to be eligible for graduation from the Three-Year Degree Programme, students are required to earn a 120 credits during their time of study.

Re-entry or Lateral Entry:

i. 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.

ii. 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 will be based on the validation of prior learning outcomes achieved and subject to availability based on intake capacity.

iii. An unsuccessful examinee at any of the above examination shall carry college assessment marks (Sessional Marks) of the theory/Practical examination to the successive attempt at the examination. The examinee however can go for his/her college assessment marks in the subject or subjects in which he/she shall be examined for total marks comprising of theory and sessional together at his/her successive attempts.

Progression to Higher ClassAllow To Keep Term (ATKT):

Eligibility for progression to higher classes shall be as per **Table – 1**

Table 1: Eligibility for progression to higher classes

S.N.	Admission to	Minimum Required Credits
1	Semester III	20 Credits from all Verticals of Semester I and II
2	Semester V	40 Credits from all Verticals of Semester I to IV

A student who could not complete a semester satisfactorily or did not keep term will be eligible for readmission to the same semester. However, readmission to the semester should be allowed only in regular session of that semester. In such case, the candidate will not be eligible to get admission in higher semester.

General Provision:

1. Record of student's Performance cum Evaluation(containing attendance, concept knowledge, intellectual/ decision making ability, handling skill, sense of responsibility, cooperative/leadership quality, presentation/demonstration) related to *Internships/Apprenticeship, Mini-Project, Field Projects /Studio Activities, Community Engagement and Services, etc.* shall be maintained bythe college/institute/university department
2. For allotment of *Internships/Apprenticeship, Mini-Project, Field Projects /Studio Activities, Community Engagement and Services, etc.*, the College/ Institute/University Department shall follow Standard Operating Procedures (SOP) with concerned College/Institute/University Department/Organization/Industry on the basis of Memorandum of Understanding (MoU) /Letter of Intent and Joining letter. Further, for validation, progress records, Evaluation Sheet etc. shall be maintained by the College/Institute/University Department.The Internship policy documents of Govt. of Maharashtra shall be adopted by the University.
3. For award of Credits to Co-curricular Courses: Health and wellness, Yoga Education, Sports and Fitness, Cultural Activities, NSS/NCC, Fine/Applied/Visual/Performing Arts, Academic Activities like paper presentations in conferences, Avishkar, start-ups, Hackathon, Quiz competitions, Article published, Participation in Summer school/ Winter School / Shortterm course, Scientific Surveys, Societal Surveys, Field Visits, Study tours, Industrial Visits, online/offline Courses on Yoga (Yoga for IQ development, Yoga for Ego development, Yoga for Anger Management, Yoga for Eyesight Improvement, Yoga for Physical Stamina, Yoga for Stress Management, etc.); the college/ institute/university department should maintain a record of the student.
4. As per Maharashtra Public Universities Act, 2016, Section 89 Chapter VIII, the results of every examination and evaluation conducted by the University will be declared within thirty days from the last date of examination for that particular course and in any case declare the results latest within forty-five days. The names of the examinees passing the examination as a whole in the minimum prescribed period and obtaining the prescribed number of places in the CGPA shall be arranged in order of merit as provided in the examination in general Ordinance no. 6 provided that the merit list only be published in summer examination.
5. An examinee who has completed the term satisfactorily but fails to present himself/herself for the examination shall be eligible for re-examination externally to the same examination, on payment of fresh fees and other fees as may be prescribed by the university from time to time.
6. A candidate/student who has successfully completed all requisite courses approved by the university and earned minimum prescribed total Credits for which he/she is admitted for the under graduate degree programme and accumulated the required Credits for the program and who has put in the minimum residence time prescribed for each semester of the program shall be eligible to receive the degree.
7. Examinations will be conducted in Offline mode in accordance with Ordinance No.9. However, under special circumstances and in specific cases, those can be conducted in Online mode on the recommendations of Board of Examination & Evaluation and approval by the Academic Council.
8. Generally, and preferably, College/Institute/Departmentinternal assessment examinations and university examinations papers should be set from the Question Bank prepared by the university.
9. Guidelines to Paper Setters are provided in Appendix B, Instructions to BOS in Appendix C, Glossary of Terms in Appendix D and Abbreviations in Appendix E, respectively. Further, at the end of Appendix E, list of references employed to compose this document is furnished.
10. Provisions of Ordinance No18/2001in respect of an Ordinance to provide grace marks for passing in a Head of passing and Improvement of Division (Higher Class) and getting Distinction in the subject and condonation of deficiency of marks in a subject shall apply to the examination under this Direction.

11. **Power to modify and remove difficulties:**
    a) Notwithstandinganything contained in the foregoing, Hon'ble Vice-Chancellor in consultation with the Dean of the faculty and all the Chairman (BoS) of the Science and Technology (Science Group) shall have the power to issue directions or orders to remove any difficulty,
    b) Nothing in the foregoing may be construed as limiting the power of the University to amend, modify or repeal any or all of the above.
12. Task for BoS for effective implementation of NEP is specified in Appendix 10, Glossary of Terms in Appendix 11 and Abbreviations in Appendix 12, respectively.

NEP Implementation Cell:

A) University Level:-

There shall be NEP Implementation Cell in the University comprising of the following members

1.	**Pro-Vice Chancellor**	**- Chairman**
2.	Deans of all faculties	- Members
3.	Head of the Department of Concerned University (Senior Professor Grade)	- Member
4.	Student Representative	- Member
5.	Director, IQAC	- Member-secretary

B. University Department Level:-

There shall be NEP Implementation Cell in each University Department comprising of the following members

1.	Head of the University Department	**-** Chairman
2.	One Teacher nominated by Hon'ble Vice-Chancellor -	- Member

C. College Level

There shall be a NEP Implementation Cell in each affiliated College comprising of the following members

1.	Principal/Director, Concerned College/Autonomous College/Institute	- Chairman
2.	Head of the Department of concerned College from each Faculty (Professor / Associate Professor Grade)	- Members
3.	Student Representative	- Member
4.	IQAC Co-Ordinator	- Member Secretary

Powers andDuties of the NEPImplementationCell

1. CommitteeshalltakereviewoftheImplementationoftheNEPaftercompletionofeverySemester
2. ThecommitteeshallreporttotheUniversityaboutdifficultiesfacedduringthe implementationof theNEP.
3. Thecommitteeshouldalsoconsiderthegrievancesofthestudentsregardingthedifficulties/disadvantages puttothem,ifany,duringtheirstudiesunderNEP.
4. ForcollegelevelanduniversityIevel,thecommitteewillalsobeaGrievanceRedressal Committeeforimplementation ofNEP.
5. Thecommitteemayconsideranyothermatterintheinterestofthestudentsasfarastheis concerned.

Appendix 11:Glossaryof the Terms

- **Academic Bank of Credits (ABC):** ABC is an academic service mechanism as a digital/virtual/online entity established and managed by MoE/UGC to facilitate students to become its academic account holders and paving the way for seamless student mobilitybetween or within degree granting Higher Education Institutions (HEIs) through a formal system of Credit recognition, Credit accumulation, Credit transfers and Credit redemption to promote distributed and flexible teaching learning.
- **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.

- **Assessment:** It is the process of collecting, recording, scoring, describing and interpreting information about learning
- **Affiliated College:** It implies any higher education institution approved by the affiliating university on the basis of the stipulated norms and guidelines by virtue of which it provides for a course/programme of study for obtaining any qualification from a university.
- **Autonomous College:** It means any institution, whether known as such or by any other name accorded with autonomous status by the UGC upon the recommendations of the affiliating university and the State Government concerned, by virtue of which it provides for a course/programme of study with academic and innovation flexibility for obtaining any qualification from a university and which, in accordance with the Rules and Regulations of such university, is recognized as competent to provide for such course/programme of study and present students undergoing such course/programme of study for the examination leading to the award of such qualification.
- **Code:** Each course shall bear a distinguishing code (three letters and three digits) that identifies the discipline from which it is being offered.
- **Credit Point:** It is the product of grade point and number of Credits for a course.
- **Cumulative Grade Point Average (CGPA):** Weighted average of the grade points obtained in all courses registered by the student across semesters.
- **Evaluation:** It is the process of making judgments based on evidences and interpretations gathered through examination and assessment and on the basis of agreed upon criteria.
- **Grade Point:** Numeric weightage attached to each letter grade.
- **Grade Point Average (GPA):** A system of calculating academic achievement based on an average, calculated by multiplying the numerical grade point received in each course by the number of Credits.
- **Graduate Attributes (GAs):** It is a set of individually assessable outcomes that are indicative of the graduate's potential to acquire competencies in that programme.
- **Higher Education Institutions:** The Higher Education Institutions (HEIs) who are empowered to award degrees by themselves or through their affiliating universities m accordance with Section 22 of the UGC Act, 1956.
- **Lateral Entry:** Lateral entry or admission is granted to those students who have exit after award of Certification, Diploma, or a Basic Bachelor's Degree and are eligible for and desirous of re-entering into the second year/ third year/ fourth year, respectively of same Four-year multidisciplinary degree programme at any ABC registered HEI within stipulated/ permissible period of years as decided by Statutory Councils of that HEI. Lateral entry is also open to those students, if he/she has already successfully completed a multidisciplinary Four-year first degree programme and is desirous of and academically capable of pursuing another multidisciplinary Four-year first degree programme an allied subject.
- **Learning Management System** (LMS): It means a system to keep track of delivery of e-Learning Programmes, learner's engagement, assessment, results, reporting and other related details in one centralized location
- **Learning Outcome Based Education (LOBE):** Adherence to student-centric learning approach to measure student's performance based on pre-determined set of outcomes.
- **Letter Grade:** Index of performance resulting from the transformation of actual marks obtained by a student in a course.
- **Proctored Examination:** It means the examination conducted under the supervision of approved person or technology enabled proctoring which ensures the identity of the test taker and the integrity of the test taking environment, either in pen-paper mode or in computer-based testing mode or in full-fledged online mode, as may be permissible.
- **Programme:** Programme /Programme of study means a higher education programme pursued for a degree specified by the Commission under Section 22 (3) of the UGC Act. It also refers to a collection of courses in which a student enrolls and which contributes to meeting the requirements for the awarding of one or more Certificates/ Diplomas/ Degrees.
- **Programme Education Objectives (PEOs):** PEOs are broad statements that describes what graduates are expected to attend within few years of graduation.

- **Programme Learning Outcomes (PLOs):** They represent the knowledge, skills and attitudes a student should attain at the end of the programme.
- **Qualifications:** Qualifications are final 'awards' such as a Certificate, Diploma or Degree.
- Qualifications are awarded by a competent authority such as a college or university in recognition of the attainment by students of the expected learning outcomes on the successful completion of a particular programme of study. Qualifications can also signify the competence to follow an occupational practice.
- **Research Project/ Dissertation:** Project work is considered as a special course involving application of knowledge in solving / analyzing /exploring a real-life situation / difficult problem. The student undertakes research in specific areas of his Major/ Core Subject with an advisory support by a teacher/faculty member.
- **Rubric (Assessment Rubric):** A rubric for assessment, also called a scoring guide, is a tool used to interpret and grade students on any kind of work against criteria and standards.
- **Semester Grade Point Average (SGPA):** Performance of a student in a given semester.

Appendix 12:Abbreviations

ABC	Academic Bank of Credit
AEC	Ability Enhancement Courses
CC	Co-curricular Courses
CAT	Continuous Assessment Test
CES	Community Engagement and service
DSC	Department Specific Core
DSE	Department Specific Elective
ES	Environment Studies
Faculty Specific Elective	FSE
FP	Field projects
GE	Generic Electives
HEI	Higher Educational Institute
IFSC	Inter Faculty Specific Core
IKS	Indian Knowledge System
Lab	Laboratory
MIL	Modern Indian Languages
MIL	Modern Indian Language
MOOC	Massive Online Open Course
NCrF	National Credit Framework
NEP	National Education Policy
OE	Open Electives
On Job Training	OJT
Pr	Practical/Practicum
Prq	Pre-requisite Course
Research Methodology	RM
RP	Research Project
SEC	Skill Enhancement Courses
Th	Theory
UGC	University Grants Commission
VEC	Value Education Courses
Vocational Enhancement Courses	VEC
VSC	Vocational Skill Courses
VSEC	Vocational and Skill Enhancement Courses

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2. UGC, New Delhi, Curriculum and Credit Framework for Undergraduate Programmes, 12 December 2022.
3. Government Resolution, Government of Maharashtra State, No. NEP/2022/ Pr. Kr. 09/ Vishi-3/Shikana dated 20 April 2023 (GR Code: 202304201925266908)
4. Government Resolution, Government of Maharashtra State, No. NEP/2022/ Pr. Kr. 105/ Vishi-3/Shikana dated 6 Dec 2022 (GR Code: 202212061843114008)
5. UGC, New Delhi,Learning Outcomes-based Curriculum Framework for Undergraduate Education, January, 2020

The existing Ordinance No. 17 of 2003 and the Direction No. 66 /2023 dated 17/10/2023 of the programme shall be repealed stage-wise and only applicable to the students who have already sought their admissions as per its provisions and shall repealed after exhausting the chances given to the failure students of old programme by the University.

Date :-05 /12/2024

Sd/-
(Dr. Milind Barhate)
Vice-Chancellor,
Sant Gadge Baba Amravati University,
Amravati

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FIRST YEAR: SEMESTER – I

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Core Courses (CC)	Theory-1	101CC101	Mathematics Foundations to Computer Science	3	3	External & Internal	60	24	40	16	100	40
	Theory-2	101CC102	Computer Architecture	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-1	101LabCC102	Computer Architecture	2	4	External & Internal	60	24	40	16	100	40
Ability Enhancement Courses (AEC)	Theory-1	101AEC101	General English - I	1	1	External & Internal	30	12	20	8	50	20
	Tutorial-1	101TuAEC101	General English - I	1	1	Internal	--	--	50	20	50	20
	Theory-2	101AEC102	Additional Course - Indian or Foreign Language Other than Mother Tongue and English [optional course]*	0	1	Internal	--	--	50	20	50	20
	Tutorial-2	101TuAEC102	Additional Course - Indian or Foreign Language Other than Mother Tongue and English (1-1- 0)) [optional course]*	0	1	Internal	--	--	50	20	50	20
Multi-Disciplinary Elective Course (MDE)	Theory-1	101MDE101	Indian Knowledge System#	2	2	External & Internal	60	24	40	16	100	40
Value added Courses (VAC)	Theory-1	101VAC101	Environmental Science and sustainability	2	2	External & Internal	60	24	40	16	100	40
Skill Enhancement courses(SEC)	Theory-1	101SEC101	Problem Solving using C	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-1	101LabSEC101	Problem Solving using C	2	4	External & Internal	60	24	40	16	100	40
Discipline Specific Elective (DSE)	--	--	--	--	--	--	--	--	--	--	--	--
			Total:	19	25							

Note: #Indian Knowledge System: Indian Culture and Civilization, Indian Vision for Human Society, Indian Science, Indian Town Planning and Architecture, Indian Mathematics and Astronomy, Indian Aesthetics, Ind Health, Wellness and Psychology (including Ayurved)
*IndianLanguages: Sanskrit/Hindi/All Regional languages
Foreign Languages: (not limited to) Spanish/German/French/Korean/Mandarin etc.
Special Note: External Examination (Theory and Practical) shall be conducted by University and Internal Examination (Theory and Tutorial) shall be conducted by college

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FIRST YEAR: SEMESTER – II

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Core Courses (CC)	Theory-3	101CC103	Object Oriented Programming using C++	3	3	External & Internal	60	24	40	16	100	40
	Theory-4	101CC104	Data Structures	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-2	101LabCC104	Data Structures	2	4	External & Internal	60	24	40	16	100	40
	Theory-5	101CC105	Operating Systems	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-3	101LabCC105	Operating Systems	1	2	External & Internal	30	12	20	8	50	20
Ability Enhancement Courses (AEC)	Theory-3	101AEC103	Additional Course - Indian or Foreign Language Other than Mother Tongue and English [optional course]*	0	1	Internal	--	--	50	20	50	20
	Tutorial-3	101AEC103	Additional Course - Indian or Foreign Language Other than Mother Tongue and English (1-1- 0)) [optional course]*	0	1	Internal	--	--	50	20	50	20
Value added Courses (VAC)	Theory-2	101VAC102	Indian Constitution	2	2	External &Internal	60	24	40	16	100	40
Skill Enhancement courses(SEC)	Theory-2	101SEC102	Object Oriented Programming using Java	3	3	External &Internal	60	24	40	16	100	40
	Lab/ Practical-2	101LabSEC102	Object Oriented Programming using Java	2	4	External & Internal	60	24	40	16	100	40
	Theory-3	101SEC103	Web Technologies	1	1	30	30	12	20	8	50	20
	Lab/ Practical-3	101LabSEC103	Web Technologies	1	2	30	30	12	20	8	50	20
			Total:	21	29							

*Indian Languages: Sanskrit/Hindi/All Regional languages
Foreign Languages: (not limited to) Spanish/German/French/Korean/Mandarin etc.

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SECOND YEAR: SEMESTER – III

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Core Courses (CC)	Theory-6	101CC201	Probability and Statistics	3	3	External & Internal	60	24	40	16	100	40
	Theory-7	101CC202	Data Base Management System	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-4	101LabCC202	Data Base Management System	2	4	External & Internal	60	24	40	16	100	40
	Theory-8	101CC203	Software Engineering	3	3	External & Internal	60	24	40	16	100	40
Value added Courses (VAC)	Lab/ Practical-2	101LabVAC201	Yoga/Sports/NCC/NSS/Disaster Management	2	4	External & Internal	60	24	40	16	100	40
Skill Enhancement courses (SEC)	Theory-4	101SEC201	Python Programming	2	2	External & Internal	60	24	40	16	100	40
	Lab/ Practical-4	101LabSEC201	Python Programming	2	4	External & Internal	60	24	40	16	100	40
Discipline Specific Elective (DSE)	Theory-1	101DSE201	Feature Engineering	1	1	External & Internal	30	12	20	8	50	20
	Lab/ Practical-1	101LabDSE201	Feature Engineering	2	4	External & Internal	60	24	40	16	100	40
			Total:	20	28							

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SECOND YEAR: SEMESTER – IV

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Core Courses (CC)	Theory-9	101CC204	Entrepreneurship and Startup Ecosystem	1	1	External & Internal	30	12	20	8	50	20
	Tutorial-3	101TuCC204	Entrepreneurship and Startup Ecosystem	1	1	Internal	--	--	50	20	50	20
	Theory-10	101CC205	Computer Networks	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-5	101LabCC205	Computer Networks	2	4	External & Internal	60	24	40	16	100	40
	Theory-11	101CC206	Design and Analysis of Algorithm	3	3	External & Internal	60	24	40	16	100	40
	Theory-12	101CC207	Artificial Intelligence	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-6	101LabCC207	Artificial Intelligence	2	4	External & Internal	60	24	40	16	100	40
Skill Enhancement courses (SEC)	Theory-5	101SEC202	Design Thinking and Innovation	1	1	External & Internal	30	12	20	8	50	20
	Tutorial-1	101TuSEC202	Design Thinking and Innovation	1	1	Internal	--	--	50	20	50	20
Discipline Specific Elective (DSE)	Theory-2	101DSE202	Introductionto ML	1	1	External & Internal	30	12	20	8	50	20
	Lab/ Practical-2	101LabDSE202	Introductionto ML	2	4	External &Internal	60	24	40	16	100	40
			Total:	20	26							

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THIRD YEAR: SEMESTER – V

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Skill Enhancement courses (SEC)	Tutorial-3	101SEC301	Quantitative Techniques	2	2	Internal	60	24	40	16	100	40
	Lab/ Practical-5	101LabSEC302	Internship/capstone Project	4	8	External & Internal	60	24	40	16	100	40
	Lab/ Practical-6	101LabSEC303	Major Project [evaluation in sixth semester]	0	4	--	--	--	--	--	--	--
Discipline Specific Elective (DSE)	Theory-3	101DSE301	Neural Network	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-3	101LabDSE301	Neural Network	2	4	External & Internal	60	24	40	16	100	40
	Theory-4	101DSE302	Digital Image Processing	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-4	101LabDSE302	Digital Image Processing	2	4	External & Internal	60	24	40	16	100	40
	Theory-5	101DSE303	Natural Language Processing	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-5	101LabDSE303	Natural Language Processing	2	4	External & Internal	60	24	40	16	100	40
			Total:	21	35							

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THIRD YEAR: SEMESTER –VI

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Core Courses (CC)	Theory-13	101CC301	Generative AI	2	2	External & Internal	60	24	40	16	100	40
	Lab/ Practical-7	101LabCC301	Generative AI	2	4	External & Internal	60	24	40	16	100	40
Ability Enhancement Courses (AEC)	Tutorial-4	101TuAEC301	Soft Skills	1	1	Internal	--	--	50	20	50	20
Skill Enhancement courses (SEC)	Lab/ Practical-7	101LabSEC304	Major Project [Initiated in 5th Semester]	4	4	External & Internal	60	24	40	16	100	40
Discipline Specific Elective (DSE)	Theory-6	101DSE304	Deep Learning for Computer Vision	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-6	101LabDSE304	Deep Learning for Computer Vision	2	4	External & Internal	60	24	40	16	100	40
	Theory-7	101DSE305	Predictive Analysis	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-7	101LabDSE305	Predictive Analysis	2	4	External & Internal	60	24	40	16	100	40
			Total:	19	25							

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FOURTH YEAR: SEMESTER –VII

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Core Courses (CC)	Theory-14	101CC401	Optimization of ML	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-8	101LabCC401	Optimization of ML	2	4	External & Internal	60	24	40	16	100	40
Multi-Disciplinary Elective Course (MDE)	Theory-2	101MDE401	Social Network Analysis	3	2	External & Internal	60	24	40	16	100	40
Skill Enhancement courses (SEC)	Theory-6	101SEC401	Dissertation work [evaluation in Eight semester]	--	8	--	--	--	--	--	--	--
	Lab/ Practical-8	101LabSEC402	Summer Internship	4	8	Internal	--	--	100	40	100	40
Discipline Specific Elective (DSE)	Theory-8	101DSE401	Explainable AI	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-8	101LabDSE401	Explainable AI	2	4	External &Internal	60	24	40	16	100	40
	Theory-9	101DSE402	Evolutionary Algorithm	3	3	External & Internal	60	24	40	16	100	40
			Total:	20	35							

Special Note: External Examination (Theory and Practical) shall be conducted by University and Internal Examination (Theory and Tutorial) shall be conducted by college

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FOURTH YEAR: SEMESTER – VIII

The Vertical	Type of Course	Course Code	Course Name	Credits	Workl oad (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Skill Enhancement courses (SEC)	Lab/ Practical-9	101LabSEC403	Dissertation work [Started in Seventh semester]	8	8	External & Internal	120	48	80	32	200	80
Discipline Specific Elective (DSE)	Theory-10	101DSE403	Speech Recognition	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-9	101LabDSE403	Speech Recognition	2	4	External & Internal	60	24	40	16	100	40
	Theory-11	101DSE404	Augmented Reality & Virtual Reality	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-10	101LabDSE404	Augmented Reality & Virtual Reality	2	4	External & Internal	60	24	40	16	100	40
	Theory-12	101DSE405	Security aspects of ML	2	4	External & Internal	60	24	40	16	100	40
			Total:	20	26							

Notes:

a. The strength of the batch of the Practical for UG Classes shall be 16 with an addition of 10% with the permission of Hon'ble Vice Chancellor. The number of the students required to constitute a batch or calculate the workload shall be in accordance with the relevant Government Resolution in force at the time, applicable to specific time, region, course type, mode of instruction, and other pertinent factors.

b. 1 Credit shall mean 1 Hour Teaching per Week per Semester (Total 15 Hrs/ Semester), the duration of 1 Teaching Period will be 60 Minutes. For Practical 1 Credit shall mean 2 Hour Teaching per Week per Semester (Total 30 Hrs/ Semester).

c. For Examination and Evaluation of Theory Courses, 40 % Marks shall be assigned to Internal Examination and 60% Marks shall be assigned to end-semester external university examination.

For 3 Credit Theory:

Total Hours: 45 per semester

Theory Paper 60 marks + Internal 40 marks = 100 marks

Course Objectives:				
Course Outcomes:	As per Blooms Taxonomy (4 to 6)			
Unit System	Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies
Unit I	Detailed pointwise contents with at least four points	12 Hrs	15 Marks	BoSshall recommend suitable pedagogical strategies, both classical and contemporary innovations, for integration into the Teaching, Learning, and Evaluation (T, L, & E) Processes. These strategies should be tailored to enhance the delivery and comprehension of the course content within each Unit, ensuring that they align with the educational objectives and learning outcomes.
Unit II	Detailed pointwise contents with at least four points	11 Hrs	15 Marks	
Unit III	Detailed pointwise contents with at least four points	11 Hrs	15 Marks	
Unit IV	Detailed pointwise contents with at least four points	11 Hrs	15 Marks	
References:	Study Materials in the form of - Reference Books, Text Books, Research Articles, Digital Resources like Weblinks, E- Contents, Educational Software, Databases, etc.			
Model Questions:	Short Type (At least 8), Long Type (At least 4) and MCQs for Internal Assessment (At least 8) wherever applicable as the need of curriculum.			

For 2 Credit Theory:

Total Hours: 30 per semester

Theory Paper 60 marks + Internal 40 marks = 100 marks

Course Objectives:				
Course Outcomes:	As per Blooms Taxonomy (4 to 6)			
Unit System	Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies
Unit I	Detailed pointwise contents with at least four points	7 Hrs	15 Marks	BoS shall recommend suitable pedagogical strategies, both classical and contemporary innovations, for integration into the Teaching, Learning, and Evaluation (T, L, & E) Processes. These strategies should be tailored to enhance the delivery and comprehension of the course content within each Unit, ensuring that they align with the educational objectives and learning outcomes.
Unit II	Detailed pointwise contents with at least four points	8 Hrs	15 Marks	
Unit III	Detailed pointwise contents with at least four points	7 Hrs	15 Marks	
Unit IV	Detailed pointwise contents with at least four points	8 Hrs	15 Marks	
References:	Study Materials in the form of - Reference Books, Text Books, Research Articles, Digital Resources like Weblinks, E- Contents, Educational Software, Databases, etc.			
Model Questions:	Short Type (At least 8), Long Type (At least 4) and MCQs for Internal Assessment (At least 8) wherever applicable as the need of curriculum.			

For 1 Credit Theory: General English – I, Entrepreneurship and Startup Ecosystem, Design Thinking and Innovation

Total Hours: 15 per semester

Theory Paper 30 marks + Internal 20 marks = 50 marks

Course Objectives:				
Course Outcomes:	As per Blooms Taxonomy (4 to 6)			
Unit System	Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies
Unit I	Detailed point wise contents with at least four points	4 Hrs	7 Marks	BoS shall recommend suitable pedagogical strategies, both classical and contemporary innovations, for integration into the Teaching, Learning, and Evaluation (T, L, & E) Processes. These strategies should be tailored to enhance the delivery and comprehension of the course content within each Unit, ensuring that they align with the educational objectives and learning outcomes.
Unit II	Detailed point wise contents with at least four points	4 Hrs	8 Marks	
Unit III	Detailed point wise contents with at least four points	4 Hrs	8 Marks	
Unit IV	Detailed point wise contents with at least four points	3 Hrs	7 Marks	
References:	Study Materials in the form of - Reference Books, Text Books, Research Articles, Digital Resources like Weblinks, E- Contents, Educational Software, Databases, etc.			
Model Questions:	Short Type (At least 8), Long Type (At least 4) and MCQs for Internal Assessment (At least 8) wherever applicable as the need of curriculum.			

For 1 Credit Theory: Web Technologies, Basics of Data Analytics using Spreadsheet, Feature Engineering, Introduction to Machine Learning

Total Hours: 15 per semester

Theory Paper 30 marks + Internal 20 marks = 50 marks

Course Objectives:				
Course Outcomes:	As per Blooms Taxonomy (4 to 6)			
Unit System	Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies
Unit I	Detailed point wise contents with at least four points	7 Hrs	15 Marks	BoS shall recommend suitable pedagogical strategies, both classical and contemporary innovations, for integration into the Teaching, Learning, and Evaluation (T, L, & E) Processes. These strategies should be tailored to enhance the delivery and comprehension of the course content within each Unit, ensuring that they align with the educational objectives and learning outcomes.
Unit II	Detailed point wise contents with at least four points	8 Hrs	15 Marks	
References:	Study Materials in the form of - Reference Books, Text Books, Research Articles, Digital Resources like Weblinks, E- Contents, Educational Software, Databases, etc.			
Model Questions:	Short Type (At least 8), Long Type (At least 4) and MCQs for Internal Assessment (At least 8) wherever applicable as the need of curriculum.			

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(Four Years- Eight Semesters Bachelor in Computer Application (Honours with Research) [(BCA)-(Honours with Research)]
FIRST YEAR: SEMESTER – I

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Core Courses (CC)	Theory-1	102CC101	Mathematics Foundations to Computer Science	3	3	External & Internal	60	24	40	16	100	40
	Theory-2	102CC102	Computer Architecture	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-1	102LabCC102	Computer Architecture	2	4	External & Internal	60	24	40	16	100	40
Ability Enhancement Courses (AEC)	Theory-1	102AEC101	General English - I	1	1	External & Internal	30	12	20	8	50	20
	Tutorial-1	102TuAEC101	General English - I	1	1	Internal	--	--	50	20	50	20
	Theory-2	102AEC102	Additional Course - Indian or Foreign Language Other than Mother Tongue and English [optional course]*	0	1	Internal	--	--	50	20	50	20
	Tutorial-2	102TuAEC102	Additional Course - Indian or Foreign Language Other than Mother Tongue and English (1-1- 0)) [optional course]*	0	1	Internal	--	--	50	20	50	20
Multi-Disciplinary Elective Course (MDE)	Theory-1	102MDE101	Indian Knowledge System#	2	2	External & Internal	60	24	40	16	100	40
Value added Courses (VAC)	Theory-1	102VAC101	Environmental Science and sustainability	2	2	External & Internal	60	24	40	16	100	40
Skill Enhancement courses(SEC)	Theory-1	102SEC101	Problem Solving using C	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-1	102LabSEC101	Problem Solving using C	2	4	External & Internal	60	24	40	16	100	40
Discipline Specific Elective (DSE)	--	--	--	--	--	--	--	--	--	--	--	--
			Total:	19	25							

Note: #Indian Knowledge System: Indian Culture and Civilization, Indian Vision for Human Society, Indian Science, Indian Town Planning and Architecture, Indian Mathematics and Astronc
Indian Aesthetics, Indian Health, Wellness and Psychology (including Ayurved)
*IndianLanguages: Sanskrit/Hindi/All Regional languages
Foreign Languages: (not limited to) Spanish/German/French/Korean/Mandarin etc.

Special Note: External Examination (Theory and Practical) shall be conducted by University and Internal Examination (Theory and Tutorial) shall be conducted by college

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FIRST YEAR: SEMESTER – II

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Core Courses (CC)	Theory-3	102CC103	Object Oriented Programming using C++	3	3	External & Internal	60	24	40	16	100	40
	Theory-4	102CC104	Data Structures	3	3	External &Internal	60	24	40	16	100	40
	Lab/ Practical-2	102LabCC104	Data Structures	2	4	External & Internal	60	24	40	16	100	40
	Theory-5	102CC105	Operating Systems	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-3	102LabCC105	Operating Systems	1	2	External & Internal	30	12	20	8	50	20
Ability Enhancement Courses (AEC)	Theory-3	102AEC103	Additional Course - Indian or Foreign Language Other than Mother Tongue and English [optional course]*	0	1	Internal	--	--	50	20	50	20
	Tutorial-3	102TuAEC103	Additional Course - Indian or Foreign Language Other than Mother Tongue and English (1-1- 0)) [optional course]*	0	1	Internal	--	--	50	20	50	20
Value added Courses (VAC)	Theory-2	102VAC102	Indian Constitution	2	2	External & Internal	60	24	40	16	100	40
Skill Enhancement courses(SEC)	Theory-2	102SEC102	Object Oriented Programming using Java	3	3	External &Internal	60	24	40	16	100	40
	Lab/ Practical-2	102LabSEC102	Object Oriented Programming using Java	2	4	External & Internal	60	24	40	16	100	40
	Theory-3	102SEC103	Web Technologies	1	1	30	30	12	20	8	50	20
	Lab/ Practical-3	102LabSEC103	Web Technologies	1	2	30	30	12	20	8	50	20
			Total:	21	29							

*Indian Languages: Sanskrit/Hindi/All Regional languages
Foreign Languages: (not limited to) Spanish/German/French/Korean/Mandarin etc.

Special Note: External Examination (Theory and Practical) shall be conducted by University and Internal Examination (Theory and Tutorial) shall be conducted by college

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SECOND YEAR: SEMESTER – III

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Core Courses (CC)	Theory-6	102CC201	Probability and Statistics	3	3	External & Internal	60	24	40	16	100	40
	Theory-7	102CC202	Data Base Management System	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-4	102LabCC202	Data Base Management System	2	4	External & Internal	60	24	40	16	100	40
	Theory-8	102CC203	Software Engineering	3	3	External & Internal	60	24	40	16	100	40
Value added Courses (VAC)	Lab/ Practical-2	102LabVAC201	Yoga/Sports/NCC/NSS/Disaster Management	2	4	External & Internal	60	24	40	16	100	40
Skill Enhancement courses(SEC)	Theory-4	102SEC201	Python Programming	2	2	External & Internal	60	24	40	16	100	40
	Lab/ Practical-4	102LabSEC201	Python Programming	2	4	External & Internal	60	24	40	16	100	40
Discipline Specific Elective (DSE)	Theory-1	102DSE201	Basics of Data Analytics using Spreadsheet	1	1	External & Internal	30	12	20	8	50	20
	Lab/ Practical-1	102LabDSE201	Basics of Data Analytics using Spreadsheet	2	4	External & Internal	60	24	40	16	100	40
			Total:	20	28							

Special Note: External Examination (Theory and Practical) shall be conducted by University and Internal Examination (Theory and Tutorial) shall be conducted by college

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SECOND YEAR: SEMESTER – IV

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Core Courses (CC)	Theory-9	102CC204	Entrepreneurship and Startup Ecosystem	1	1	External & Internal	30	12	20	8	50	20
	Tutorial-3	102CC204	Entrepreneurship and Startup Ecosystem	1	1	Internal	--	--	50	20	50	20
	Theory-10	102CC205	Computer Networks	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-5	102LabCC205	Computer Networks	2	4	External & Internal	60	24	40	16	100	40
	Theory-11	102CC206	Design and Analysis of Algorithm	3	3	External & Internal	60	24	40	16	100	40
	Theory-12	102CC207	Artificial Intelligence	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-6	102LabCC207	Artificial Intelligence	2	4	External & Internal	60	24	40	16	100	40
Skill Enhancement courses(SEC)	Theory-5	102SEC202	Design Thinking and Innovation	1	1	External & Internal	30	12	20	8	50	20
	Tutorial-1	102TuSEC202	Design Thinking and Innovation	1	1	Internal	--	--	50	20	50	20
Discipline Specific Elective (DSE)	Theory-2	102DSE202	Basics of Data Analytics using Spreadsheet	1	1	External & Internal	30	12	20	8	50	20
	Lab/ Practical-2	102LabDSE202	Basics of Data Analytics using Spreadsheet	2	4	External &Internal	60	24	40	16	100	40
			Total:	20	26							

Special Note: External Examination (Theory and Practical) shall be conducted by University and Internal Examination (Theory and Tutorial) shall be conducted by college

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THIRD YEAR: SEMESTER – V

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Skill Enhancement courses(SEC)	Tutorial-3	102SEC301	Quantitative Techniques	2	2	Internal	60	24	40	16	100	40
	Lab/ Practical-5	102LabSEC302	Internship/capstone Project	4	8	External & Internal	60	24	40	16	100	40
	Lab/ Practical-6	102LabSEC303	Major Project[evaluation in sixth semester]	0	4	--	--	--	--	--	--	--
Discipline Specific Elective (DSE)	Theory-3	102DSE301	Introduction to Data Science	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-3	102LabDSE301	Introduction to Data Science	2	4	External & Internal	60	24	40	16	100	40
	Theory-4	102DSE302	Time Series Analysis	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-4	102LabDSE302	Time Series Analysis	2	4	External & Internal	60	24	40	16	100	40
	Theory-5	102DSE303	Machine Learning	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-5	102LabDSE303	Machine Learning	2	4	External & Internal	60	24	40	16	100	40
			Total:	21	35							

Special Note: External Examination (Theory and Practical) shall be conducted by University and Internal Examination (Theory and Tutorial) shall be conducted by college

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THIRD YEAR: SEMESTER –VI

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Core Courses (CC)	Theory-13	102CC301	Generative AI	2	2	External & Internal	60	24	40	16	100	40
	Lab/ Practical-7	102LabCC301	Generative AI	2	4	External & Internal	60	24	40	16	100	40
Ability Enhancement Courses (AEC)	Tutorial-4	102TuAEC301	Soft Skills	1	1	Internal	--	--	50	20	50	20
Skill Enhancement courses(SEC)	Lab/ Practical-7	102LabSEC304	Major Project [Initiated in 5th Semester]	4	4	External & Internal	60	24	40	16	100	40
Discipline Specific Elective (DSE)	Theory-6	102DSE304	Big Data Analytics	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-6	102LabDSE304	Big Data Analytics	2	4	External & Internal	60	24	40	16	100	40
	Theory-7	102DSE305	Exploratory Data Analysis	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-7	102LabDSE305	Exploratory Data Analysis	2	4	External & Internal	60	24	40	16	100	40
			Total:	19	25							

Special Note: External Examination (Theory and Practical) shall be conducted by University and Internal Examination (Theory and Tutorial) shall be conducted by college

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FOURTH YEAR: SEMESTER –VII

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Core Courses (CC)	Theory-14	102CC401	OptimizationofML	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-8	102LabCC401	OptimizationofML	2	4	External & Internal	60	24	40	16	100	40
Multi-Disciplinary Elective Course (MDE)	Theory-2	102MDE401	Social Network Analysis	3	2	External &Internal	60	24	40	16	100	40
Skill Enhancement courses(SEC)	Theory-6	102SEC401	Dissertation work [evaluation in Eight semester]	--	8	--	--	--	--	--	--	--
	Lab/ Practical-8	102LabSEC402	Summer Internship	4	8	Internal	--	--	100	40	100	40
Discipline Specific Elective (DSE)	Theory-8	102DSE401	Business Intelligence & Analytics	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-8	102LabDSE401	Business Intelligence & Analytics	2	4	External & Internal	60	24	40	16	100	40
	Theory-9	101DSE402	Data Mining & Warehousing	3	3	External & Internal	60	24	40	16	100	40
			Total:	20	35							

Special Note: External Examination (Theory and Practical) shall be conducted by University and Internal Examination (Theory and Tutorial) shall be conducted by college

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FOURTH YEAR: SEMESTER – VIII

The Vertical	Type of Course	Course Code	Course Name	Credits	Workload (Hrs/ Week)	Mode of Examination, Evaluation & Assessment	Examination Theory/Practical				Examination Theory/ Practical/ Tutorial (Total)	
							External		Internal			
							Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks
Skill Enhancement courses(SEC)	Lab/ Practical-9	102LabSEC403	Dissertation work [Started in Seventh semester]	8	8	External & Internal	120	48	80	32	200	80
Discipline Specific Elective (DSE)	Theory-10	102DSE403	Advanced Data Visualization	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-9	102LabDSE403	Advanced Data Visualization	2	4	External & Internal	60	24	40	16	100	40
	Theory-11	102DSE404	Cloud Computing for Data Analytics	3	3	External & Internal	60	24	40	16	100	40
	Lab/ Practical-10	102LabDSE404	Cloud Computing for Data Analytics	2	4	External & Internal	60	24	40	16	100	40
	Theory-12	102DSE405	Data Security & Privacy	2	4	External & Internal	60	24	40	16	100	40
			Total:	20	26							

Notes:

a. The strength of the batch of the Practical for UG Classes shall be 16 with an addition of 10% with the permission of Hon'ble Vice Chancellor. The number of the students required to constitute a batch or calculate the workload shall be in accordance with the relevant Government Resolution in force at the time, applicable to specific
time, region, course type, mode of instruction, and other pertinent factors.

b. 1 Credit shall mean 1 Hour Teaching per Week per Semester (Total 15 Hrs/ Semester), the duration of 1 Teaching Period will be 60 Minutes. For Practical 1 Credit shall mean 2 Hour Teaching per Week per Semester (Total 30 Hrs/ Semester).

c. For Examination and Evaluation of Theory Courses, 40 % Marks shall be assigned to Internal Examination and 60% Marks shall be assigned to end-semester external university examination.

For 3 Credit Theory:

Total Hours: 45 per semester

Theory Paper 60 marks + Internal 40 marks = 100 marks

Course Objectives:				
Course Outcomes:	As per Blooms Taxonomy (4 to 6)			
Unit System	Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies
Unit I	Detailed pointwise contents with at least four points	12 Hrs	15 Marks	BoSshall recommend suitable pedagogical strategies, both classical and contemporary innovations, for integration into the Teaching, Learning, and Evaluation (T, L, & E) Processes. These strategies should be tailored to enhance the delivery and comprehension of the course content within each Unit, ensuring that they align with the educational objectives and learning outcomes.
Unit II	Detailed pointwise contents with at least four points	11 Hrs	15 Marks	
Unit III	Detailed pointwise contents with at least four points	11 Hrs	15 Marks	
Unit IV	Detailed pointwise contents with at least four points	11 Hrs	15 Marks	
References:	Study Materials in the form of - Reference Books, Text Books, Research Articles, Digital Resources like Weblinks, E- Contents, Educational Software, Databases, etc.			
Model Questions:	Short Type (At least 8), Long Type (At least 4) and MCQs for Internal Assessment (At least 8) wherever applicable as the need of curriculum.			

For 2 Credit Theory:

Total Hours: 30 per semester

Theory Paper 60 marks + Internal 40 marks = 100 marks

Course Objectives:				
Course Outcomes:	As per Blooms Taxonomy (4 to 6)			
Unit System	Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies
Unit I	Detailed pointwise contents with at least four points	7 Hrs	15 Marks	BoS shall recommend suitable pedagogical strategies, both classical and contemporary innovations, for integration into the Teaching, Learning, and Evaluation (T, L, & E) Processes. These strategies should be tailored to enhance the delivery and comprehension of the course content within each Unit, ensuring that they align with the educational objectives and learning outcomes.
Unit II	Detailed pointwise contents with at least four points	8 Hrs	15 Marks	
Unit III	Detailed pointwise contents with at least four points	7 Hrs	15 Marks	
Unit IV	Detailed pointwise contents with at least four points	8 Hrs	15 Marks	
References:	Study Materials in the form of - Reference Books, Text Books, Research Articles, Digital Resources like Weblinks, E- Contents, Educational Software, Databases, etc.			
Model Questions:	Short Type (At least 8), Long Type (At least 4) and MCQs for Internal Assessment (At least 8) wherever applicable as the need of curriculum.			

For 1 Credit Theory: General English – I, Entrepreneurship and Startup Ecosystem, Design Thinking and Innovation

Total Hours: 15 per semester

Theory Paper 30 marks + Internal 20 marks = 50 marks

Course Objectives:				
Course Outcomes:	As per Blooms Taxonomy (4 to 6)			
Unit System	Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies
Unit I	Detailed point wise contents with at least four points	4 Hrs	7 Marks	BoS shall recommend suitable pedagogical strategies, both classical and contemporary innovations, for integration into the Teaching, Learning, and Evaluation (T, L, & E) Processes. These strategies should be tailored to enhance the delivery and comprehension of the course content within each Unit, ensuring that they align with the educational objectives and learning outcomes.
Unit II	Detailed point wise contents with at least four points	4 Hrs	8 Marks	
Unit III	Detailed point wise contents with at least four points	4 Hrs	8 Marks	
Unit IV	Detailed point wise contents with at least four points	3 Hrs	7 Marks	
References:	Study Materials in the form of - Reference Books, Text Books, Research Articles, Digital Resources like Weblinks, E- Contents, Educational Software, Databases, etc.			
Model Questions:	Short Type (At least 8), Long Type (At least 4) and MCQs for Internal Assessment (At least 8) wherever applicable as the need of curriculum.			

For 1 Credit Theory: Web Technologies, Basics of Data Analytics using Spreadsheet, Feature Engineering, Introduction to Machine Learning

Total Hours: 15 per semester

Theory Paper 30 marks + Internal 20 marks = 50 marks

Course Objectives:				
Course Outcomes:	As per Blooms Taxonomy (4 to 6)			
Unit System	Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies
Unit I	Detailed point wise contents with at least four points	7 Hrs	15 Marks	BoS shall recommend suitable pedagogical strategies, both classical and contemporary innovations, for integration into the Teaching, Learning, and Evaluation (T, L, & E) Processes. These strategies should be tailored to enhance the delivery and comprehension of the course content within each Unit, ensuring that they align with the educational objectives and learning outcomes.
Unit II	Detailed point wise contents with at least four points	8 Hrs	15 Marks	
References:	Study Materials in the form of - Reference Books, Text Books, Research Articles, Digital Resources like Weblinks, E- Contents, Educational Software, Databases, etc.			
Model Questions:	Short Type (At least 8), Long Type (At least 4) and MCQs for Internal Assessment (At least 8) wherever applicable as the need of curriculum.			