DIRECTION

No. : 31/2025. Date : 03/04/2025.

Subject : Examinations leading to the Degree of Bachelor of Science (Data Science and Analytics) (Three Years – Six Semesters Degree Course) and under National Education Policy-2020.

Whereas, the Ordinance No. /200 and Direction No.58/2023 dated 22/08/2024 with respect to an examination leading to the Degree of B.S.c. and Bachelor of Science (Data Science) (Three Years – Six Semesters Degree Course) are in existence in the University,

AND

Whereas, the Government of Maharashtra vide its letter क्र.मान्यता-२०२३/प्र.क्र.९५/मशि—४, दिनांक १५ जून २०२३ has sanctioned Bachelor of Science (Data Science and Analytics) – Three Years –Six Semesters Degree Course.

AND

Whereas, the University has granted first time affiliation to the above Degree Programme Bachelor of Science (Data Science and analytics) vide Notification No. 93/2023, dated 13/07/2023, published in University Gazette Part – II,

AND

Whereas, the Management Council vide its Item No. 117 dated 14/06/2024 has given approval for the institution of said Degree,

AND

Whereas, the Board of Study in Computer Science (including Computer Application and Computer Science) (Computer Software) in its meeting held on 30/11/2024 vide Item No. 52 has prepared the Scheme of Teaching, Learning, Examination and Evaluation and the Syllabi,

AND

Whereas, Hon'ble Vice-Chancellor has approved the recommendation of the board of Study on behalf of the Faculty of Science and Technology and Academic Council under section 12 (7) on 19/12/2024,

AND

Whereas, a Sub-committee constituted by the Board of Study in Computer Science (including Computer Application and Computer Science) (Computer Software) vide Item No.57 in its meeting dated 10/01/2025 has prepared the Provisions for Direction vide Item No. 01 dated 24/03/2025 and recommended it to the Faculty of Science and Technology and the Academic Council,

AND

Whereas, the above recommendations of the sub committee has been approved by Hon'ble Vice-Chancellor under section 12(7) of Maharashtra Public University Act, 2016 on behalf of the Faculty of Science and Technology and the Academic Council on 02 /04/2025

AND

Whereas, the Scheme of Teaching, Learning, Examination and Evaluation of Semester I to VI of the Programme of Bachelor of Science (Data Science and Analytics) is required to be regulated by issuing an Ordinance

AND

Whereas, making an Ordinance is a time consuming process,

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 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, a 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 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 Report is prepared inclusive Scheme of Teaching, Learning, Examination and Evaluation and Provision of Ordinance/Direction,

AND

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

AND

Whereas, the 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 under National Education Policy- 2020,

AND

Whereas, the 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 Academic Council,

AND

Whereas, the Scheme of Teaching, Learning, Examination and Evaluation along with the syllabi of 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 Board of Studies 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 Degree of Bachelor of Science (Data Science and Analytics) (Three Years – Six 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.

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 Science (Data Science and Analytics) in the faculty of Science & Technology

Implementation Year

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

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 **Bachelor of Science (Data Science and Analytics)**

Course Level/Duration/System:

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

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

a. One year: Certificate in Data Science and Analytics
b. Two years: Diploma in Data Science and Analytics
c. Three years: Bachelor of Science (Data Science and Analytics)

Minimum Eligibility Criteria:

Eligibility for admission to Three-year Bachelor of Science (Data Science and Analytics)UG Program in the faculty of Science & Technology will be as follows:

- 12th Standard examination of Maharashtra State Board of Secondary and Higher Secondary Education with Mathematics OR

+2 level Higher Secondary Vocational Certificate (H.S.V.C.) in Electronics Technology or Computer Technology OR an Examination equivalent thereto.

After Year 1, Students are advised to take Social Responsibility & Community Engagement-encompassing Community Engagement with an NGO in the vacation time.

A Certificate in Data Science and Analytics will be awarded, if a student Wishes to exit at the end of First year.

Exit Criteria after First Year of Bachelor of Science (Data Science and Analytics) Programme:

Students will have the option to exit the Bachelor of Bachelor of Science (Data Science and Analytics)program after successfully completing the first year. Upon exit, they will be awarded a Certificate in Data Science and Analytics . 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 Bachelor of Science (Data Science and Analytics) 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 Internship for Eight Weeks in the industry/Research or Academic Institute. This component will be evaluated during the fifth semester.
2. Diploma in Data Science and Analytics will be awarded, if a student wishes to exit at the end of Second year.

Exit Criteria after Second Year of Bachelor of Science (Data Science and Analytics) **Programme:**

Students will have the option to exit the Bachelor of Science (Data Science and Analytics) program after successfully completing the second year. Upon exit, they will be awarded UG Diploma in Data Science and Analytics . 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. **Social Responsibility & Community Engagement**: 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.

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 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 Bachelor of Science (Data Science and Analytics) Program as per the respective University / Admitting Body schedule after earning requisite credits in the Second year.

Bachelor of Science (Data Science and Analytics)Degree will be awarded, if a student wishes to exit at the end of 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 Redemption and 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 and Diploma to the students at the end of the second and fourth semester of a Three Years Degree Programme. Students will receive a Bachelor's degree on successfully completing of all Six 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** in CAT 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/practical examinations of Semester-I, II, III, IV, V and VI 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 following Schedule–

Sr. No.	Name of the Examination	End Semester Examination	Supplementary Examination*
1	Semester-I, III and V	Winter	Summer
2	Semester-II, IV and VI	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 Practical examination 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 HEI to 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

Mapping of Marks to Grades

Each course (Theory/Practical) is to be assigned 100 marks, irrespective of the 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, to repeat 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) = $\sum(Ci \times Gi) / \sum Ci$

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.

Equivalence of the conventional division/class

Equivalence of the conventional division/class to the corresponding C.G.P.A. in final semester shall be in accordance 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 but less 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 Six 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 or second year of the Three years Undergraduate Programmes, with Certificate or Diploma respectively, then the results of successful candidates at the end of the second, and fourth & Sixth semesters shall also be classified on the basis of the CGPA obtained in the two, four or six 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 UG programme shall be awarded an appropriate degree in Major/ Core Subject on completion of VI Semester with the minimum of 130 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 Six 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 130 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 Two years of exit and complete the degree programme within the stipulated maximum period of Five 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 Class Allow 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 by the 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 / Short term 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/Department internal 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 No.18/2001in 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) Notwithstanding anything 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 and Duties of the NEP Implementation Cell

1. Committee shall take review of the Implementation of the NEP after completion of every Semester
2. The committee shall report to the University about difficulties faced during the implementation of the NEP.
3. The committee should also consider the grievances of the students regarding the difficulties/disadvantages put to them, if any, during their studies under NEP.
4. For college level and University level, the committee will also be a Grievance Redressal Committee for implementation of NEP.
5. The committee may consider any other matter in the interest of the students as far as the NEP is concerned.

Appendix 11: Glossary of 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 mobility between 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

Bibliography:

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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 Direction No. 58/2024 dated 22/08/2024 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 :- 02 /04/2025

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

SantGadge Baba Amravati University Amravati
B.Sc.DataScienceandAnalytics(Semester-I)NEP

Sr. No	Type	Subject Code	Subject	TeachingandLearning Scheme					Duration of Exam Hrs	ExaminationandEvaluation Scheme							
				TeachingPeriod perweek				Credits		MaximumMarks					MinimumpassingMarks		
										External		Internal		Total marks			
				L	T	P	Total Hrs			Th	Pr	Th	Pr		External	Internal	Total
1	AEC	N1DA1	EnglishCompositionand Communication	1	1	-	02	02	02	30	-	20	-	50	12	08	20
2	Core	N1DA2	FoundationMathematics	3	-	-	03	03	03	50	-	30	-	80	20	12	32
3	Core	N1DA3	ProblemSolvingUsingC	3	-	-	03	03	03	50	-	30	-	80	20	12	32
4	Core	N1DA4	Data Structure	3	-	-	03	03	03	50	-	30	-	80	20	12	32
5	SEC/LAB	N1DA5	DataAnalysiswithExcel-LAB	-	-	2	04	02	-	-	25	-	25	50	10	10	20
6	SEC/LAB	N1DA6	C-ProgrammingLAB	-	-	2	04	02	-	-	25	-	25	50	10	10	20
7	SEC/LAB	N1DA7	DataStructureLAB	-	-	2	04	02	-	-	25	-	25	50	10	10	20
8	IKS	N1DA8	IndianKnowledgeSystem	2	-	-	02	02	02	CollegeLevel Theory				50	-	20	20
9	VAC	N1DA9	EnvironmentalScience	2	-	-	02	02	02	CollegeLevel Theory				50	-	20	20
10	OE-I	N1DA10	*MOOCS/SWYAM/NEPTEL/GOEC Basket Courses	-	-	1	02	01	-	College Assessment				50	-	20	20
11	Assessment Hours						06										
	TOTAL						**35**	**22**						**590**			
Sem-ITotalCredit			**22**	**Total Marks**				**590**									

InternalAssessmentGuidelines

For 30 Marks Internal (Theory) – Test 1 = 05M , Test 2 = 05M, Assignment/Seminar/Paper-Presentation =10M, Common Test Based on Whole Syllabus = 10M**For 20 Marks Internal (Theory) –** Test 1 = 05M , Test 2 = 05M, Common Test Based on Whole Syllabus = 10M

For25MarksInternal(Practical)–MiniProject=10M,Record=05M,SkillTest=05M,AttendanceandPerformance=05M

For50MarksCollegeLevelTheory–Exam=40M,Assignment=10M

OE-IAssessment–CertificateSubmission–20M,AssignmentSubmission-20M,Viva-Voce-10MifSubjectChoosefromGOECBasketthen40markspaperand10marksAssignmentshouldbeconductedonCollege Level

***FacultywisebasketotherthanfacultycoresubjectIn.**

Internship will be conducted after Ist semester till Vth semester in vacations for minimum 60hrs It's 2 cred its will be reflected in final semester credit grade report.

SantGadgeBabaAmravatiUniversityAmravati

B.Sc.DataScienceandAnalytics(Semester-II)NEP

Sr. No	Type	Subject Code	Subject	TeachingandLearning Scheme					Duration of Exam Hrs	ExaminationandEvaluation Scheme							
				TeachingPeriodper week				Credits		MaximumMarks					MinimumpassingMarks		
										External		Internal		Total marks	External	Internal	Total
				L	T	P	Total Hrs			Th	Pr	Th	Pr				
1	AEC	N2DA1	CommunicationSkills	1	1	-	02	02	02	30	-	20	-	50	12	08	20
2	Core	N2DA2	StatisticsforDataScience	3	-	-	03	03	03	50	-	30	-	80	20	12	32
3	Core	N2DA3	DatabaseManagementSystem	3	-	-	03	03	03	50	-	30	-	80	20	12	32
4	Core	N2DA4	Pythonfor Data Science	3	-	-	03	03	03	50	-	30	-	80	20	12	32
5	SEC/LAB	N2DA5	DBMS-LAB	-	-	3	06	03	-	-	25	-	25	50	10	10	20
6	SEC/LAB	N2DA6	PythonProgramming –LAB	-	-	3	06	03	-	-	25	-	25	50	10	10	20
7	SEC	N2DA7	DesignThinkingandInnovation	2	-		02	02	02	30	-	20	-	50	12	08	20
8	VAC	N2DA8	DataScienceEthics	2	-	-	02	02	02	CollegeLevel Theory				50	-	20	20
9	OE-II	N2DA9	MOOCS/SWYAM/NEPTEL/GOEC Basket Courses*	-	-	1	02	01		CollegeAssessment				50	-	20	20
10	AssessmentHours						**06**										
	TOTAL						**35**	**22**						**540**			
Sem-II TotalCredit			**22**	**TotalMarks**				**540**									

InternalAssessmentGuidelines

For 30 Marks Internal (Theory) – Test 1 = 05M , Test 2 = 05M, Assignment/Seminar/Paper-Presentation =10M, Common Test Based on Whole Syllabus = 10M**For 20 Marks Internal (Theory) –** Test 1 = 05M , Test 2 = 05M, Common Test Based on Whole Syllabus = 10M

For25MarksInternal(Practical)–MiniProject=10M,Record=05M,SkillTest=05M,AttendanceandPerformance=05M

For50MarksCollegeLevelTheory–Exam=40M,Assignment=10M

OE-IIAssessment–CertificateSubmission–20M,AssignmentSubmission-20M,Viva-Voce-10MifSubjectChoosefromGOECBasketthen40markspaperand10marksAssignmentshouldbeConductedonCollegeLevel

***FacultywisebasketotherthanfacultycoresubjectS.**

Internship will be conducted after Ist semester till Vth semester in vacations for minimum 60hrs It's 2 cred its will be reflected in final semester credit grade report.

SantGadgeBabaAmravatiUniversityAmravati

B.Sc.DataScienceandAnalytics(Semester-III)NEP

Sr. No	Type	Subject Code	Subject	TeachingandLearning Scheme					Duration of Exam Hrs	ExaminationandEvaluation Scheme							
				TeachingPeriodper week				Credits		MaximumMarks					Minimum passingMarks		
										External		Internal		Total marks	External	Internal	Total
				L	T	P	Total Hrs			Th	Pr	Th	Pr				
1	Core	N3DA1	IntroductiontoDataScience	3	-	-	03	03	03	50	-	30	-	80	20	12	32
2	Core	N3DA2	DesignandAnalysis ofAlgorithms	3	-	-	03	03	03	50	-	30	-	80	20	12	32
3	Core	N3DA3	OperatingSystems	3	-	-	03	03	03	50	-	30	-	80	20	12	32
4	DSE	N3DA4	ProfessionalElective1	3	-	-	03	03	03	50	-	30	-	80	20	12	32
5	SEC/LAB	N3DA5	Elective1- LAB	-	-	2	04	02	-	-	25	-	25	50	10	10	20
6	SEC/LAB	N3DA6	OperatingSystem-LAB	-	-	3	06	03	-	-	25	-	25	50	10	10	20
7	SEC/LAB	N3DA7	DAA-LAB	-	-	3	06	03	-	-	25	-	25	50	10	10	20
8	CC	N3DA8	CoCurricularCourses*	-	-	2	04	02	02					30	-	12	12
9	AssessmentHours						03										
	TOTAL						**35**	**22**						**520**			
Sem-IIITotalCredit			**22**	**TotalMarks**				**520**									

ProfessionalElective1: AdvanceDatabaseTechnologies,CloudComputingforData Analytics

***HealthandWellness,YogaEducation,Sports,Fitness, CulturalActivities,Paperpresentation,Conference,CommunityEngagement,FieldVisit,Avshikar,NSD,NSS/NCCandFine/Applied/Visual/PerformingArts. Minimum District Level Certificate Required.**

Internship will be conducted after Ist semester till Vth semester in vacations for minimum 60hrs It's 2 cred its will be reflected in final semester credit grade report.

SantGadgeBabaAmravatiUniversityAmravati

B.Sc.DataScienceandAnalytics(Semester-IV)NEP

Sr. No	Type	Subject Code	Subject	TeachingandLearning Scheme					Duration of Exam Hrs	ExaminationandEvaluation Scheme							
				TeachingPeriodper week				Credits		MaximumMarks					MinimumpassingMarks		
										External		Internal		Total marks			
				L	T	P	Total Hrs			Th	Pr	Th	Pr		External	Internal	Total
1	Core	N4DA1	EntrepreneurshipandStart-up Ecosystem	2	-	-	02	02	02	30	-	20	-	50	12	08	20
2	Core	N4DA2	Optimization Techniques	3	-	-	03	03	03	50	-	30	-	80	20	12	32
3	Core	N4DA3	ArtificialIntelligence&Machine Learning	3	-	-	03	03	03	50	-	30	-	80	20	12	32
4	Core	N4DA4	DataMiningandDataWarehousing	3	-	-	03	03	03	50	-	30	-	80	20	12	32
5	DSE	N4DA5	ProfessionalElective2	3	-	-	03	03	03	50	-	30	-	80	20	12	32
6	SEC/LAB	N4DA6	OptimizationTechniques-LAB	-	-	2	04	02	-	-	25	-	25	50	10	10	20
7	SEC/LAB	N4DA7	MachineLearning-LAB	-	-	3	06	03	-	-	25	-	25	50	10	10	20
8	SEC/LAB	N4DA8	DMDW – LAB	-	-	3	06	03	-	-	25	-	25	50	10	10	20
9	AssessmentHours						05										
	TOTAL						**35**	**22**						**520**			
Sem-IVTotal Credit			**22**	**Total Marks**				**520**									

ProfessionalElective2: DigitalMarketingAnalytics,LLM'sandGenerativeAI

Internship will be conducted after Ist semester till Vth semester in vacations for minimum 60hrs It's 2 cred its will be reflected in final semester credit grade report.

SantGadgeBabaAmravatiUniversityAmravati

B.Sc. Data Science andAnalytics (Semester-V)NEP

Sr. No	Type	Subject Code	Subject	TeachingandLearning Scheme					Duration of Exam Hrs	ExaminationandEvaluation Scheme							
				TeachingPeriodper week				Credits		MaximumMarks					Minimum passing Marks		
										External		Internal		Total marks	External	Internal	Total
				L	T	P	Total Hrs			Th	Pr	Th	Pr				
1	Core	N5DA1	DataHandling Visualization	3	-	-	03	03	03	50	-	30	20	80	20	12	32
2	Core	N5DA2	BigData Analytics	3	-	-	03	03	03	50	-	30	20	80	20	12	32
3	Core	N5DA3	Predictive Analysis	3	-	-	03	03	03	50	-	30	20	80	20	12	32
4	DSE	N5DA4	ProfessionalElective3	3	-	-	03	03	03	50	-	30	20	80	20	12	32
5	SEC/LAB	N5DA5	DataVisualizationwithPowerBI-LAB	-	-	2	04	02	-	-	25	-	10	50	10	10	20
6	SEC/LAB	N5DA6	BigDataAnalytics–LAB	-	-	2	04	02	-	-	25	-	10	50	10	10	20
7	SEC/LAB	N5DA7	LABBasedonElective 3	-	-	2	04	02	-	-	25	-	10	50	10	10	20
8	SEC	N5DA8	Seminar	-	-	1	02	01	-	-	-	-	-	50	-	20	20
9	SEC	N5DA9	ProjectPhaseI	-	-	2	04	02	-	-	-	-	-	50	-	20	20
10	AssessmentHours						05										
	TOTAL						**35**	**21**						**570**			
Sem-VTotal Credit			**21**	**TotalMarks**				**570**									

ProfessionalElective3: SocialNetworkAnalysis,TextAnalytics,ExploratoryDataAnalytics

Internship will be conducted after Ist semester till Vth semester in vacations for minimum 60hrs It's 2 cred its will be reflected in final semester credit grade report.

B.Sc.Data Science and Analytics (Semester-VI)NEP

Sr. No	Type	Subject Code	Subject	TeachingandLearning Scheme					Duration of Exam Hrs	ExaminationandEvaluation Scheme							
				TeachingPeriodper week				Credits		MaximumMarks					MinimumpassingMarks		
										External		Internal		Total marks	External	Internal	Total
				L	T	P	Total Hrs			Th	Pr	Th	Pr				
1	Core	N6DA1	BusinessAnalyticsandIntelligence	3	-	-	03	03	03	50	-	30	-	80	20	12	32
2	Core	N6DA2	DataSecurityandPrivacy	3	-	-	03	03	03	50	-	30	-	80	20	12	32
3	Core	N6DA3	AdvanceData Analytics	3	-	-	03	03	02	50	-	30	-	80	20	12	32
4	SEC/LAB	N6DA4	BusinessAnalyticsandIntelligence-LAB	-	-	2	04	02	-	-	25	-	25	50	10	10	20
5	SEC/LAB	N6DA5	DataSecurityandPrivacy-LAB	-	-	2	04	02	-	-	25	-	25	50	10	10	20
6	SEC/LAB	N6DA6	AdvanceDataAnalytics-LAB	-	-	2	04	02	-	-	25	-	25	50	10	10	20
7	SEC	N6DA7	Internship	-	-	-	-	02	-					-	-	-	
8	SEC	N6DA8	ProjectPhaseII	-	-	4	08	04	-	-	50	-	50	100	20	20	40
	AssessmentHours						06										
	TOTAL						**35**	**21**						**490**			
Sem-VITotalCredit			**21**	**Total Marks**				**490**									