AMITY UNIVERSITY
UTTAR PRADESH

PROGRAMME HANDBOOK

MODEL FRAMEWORK, PROGRAMME STRUCTURE, GRADUATE ATTRIBUTES, PROGRAMME EDUCATIONAL OBJECTIVES, PROGRAMME LEARNING OUTCOMES, EMPLOYABILITY, ASSESSMENT PLAN AND SCHEME OF INSTRUCTIONS FOR BACHELORS' PROGRAMMES

FACULTY OF BIOSCIENCES AND BIOTECHNOLOGY
AMITY INSTITUTE OF VIROLOGY AND IMMUNOLOGY

PROGRAMME GROUP: UNDERGRADUATE PROGRAMME

1. THREE YEARS BACHELORS (HONORS) PROGRAMMES IN LIFE SCIENCES

2020-2021

CONTENTS

1. Introduction: About Amity University

Amity University Uttar Pradesh is a research and innovation driven University that seeks to develop graduates of international distinction by providing high quality education. Amity is at the forefront of cutting-edge technology and scientific research. It has a strong R&D infrastructure and has numerous facilities and labs with modern state of the art equipment. Today, Amity is the hub of scientific learning, innovation, and high-end research.

The University looks to serve as a vibrant platform for scientists, researchers and academicians drawn from world-renowned scientific and research organizations as well as academic institutions.

At Amity University Uttar Pradesh, academic excellence is the central focus of teaching and learning. The academic rigor and relevancy provide the students an advantage to grow into leaders in their chosen fields. Students can choose from more than 300 programs in more than 50 disciplines. Conferences, Workshops and Seminars are conducted throughout the academic year, with active participation from the Industry and Academia.

The academic atmosphere of the University is encouraging, engaging, equitable and non-discriminatory. The Students, Faculty and Staff work as a community, as Amitian's, for the holistic development of each student. Students are encouraged to participate in various co-curricular and extra-curricular National and International Competitions as well as in Military Training Camps.

At Amity we benchmark only against the best institutions around the world. Our faculty and senior team travel all over the globe to learn and imbibe the best practices so that we can give a solid foundation for learning. As part of this endeavor, we have air-conditioned amphitheater style classrooms that provide the most conducive atmosphere for dynamic and focused discussions, while the libraries at our campus are equipped with over 1,00,000 books, periodicals, national and international journals, CD-ROMS, covering all aspects of academic studies and research material. The hi-tech labs act as ideal training grounds for budding professionals that allow students to experiment and bring to practice what they have learnt in theory.

Amity's focus on path-breaking innovations in science & technology, a globally benchmarked infrastructure and record job offers have directly resulted in Amity Institutes emerging among the most sought-after education destinations. Amity's fast expanding network of globally benchmarked institutions has resulted in campuses across Noida, Greater Noida, Lucknow, and Dubai. Amity's focus on path-breaking innovations in science & technology, a globally benchmarked infrastructure and record job offers have directly resulted in Amity institutes emerging among the most sought-after education destinations.

1.1 University Vision, Mission and Core Values

Vision

Building the nation and the society through providing total, integrated and trans-cultural quality education and to be the global front runner in value education and nurturing talent in which Modernity Blends with Tradition

Mission

To provide education at all levels in all disciplines of modern times and in the futuristic and emerging frontier areas of knowledge, learning and research and to develop the overall personality of students by making them not only excellent professionals but also good individuals, with understanding and regard for human values, pride in their heritage and culture, a sense of right and wrong and yearning for perfection and imbibe attributes of courage of conviction and action.

Core Values

Academic Excellence

University strives for the uncompromising quality and highest standard of excellence in teaching, learning, research, and scholarship across various disciplines.

Integrity & Ethics

University upholds the highest ethical values, integrity and professionalism and an unwavering commitment to academic freedom, transparency, and accountability.

Diversity & Mutual Respect

University nurtures an environment of safety, trust & mutual respect and embeds equality & diversity in its Strategy by ensuring that the strategic plans are fair and inclusive.

Expand horizons of Knowledge

University is driven by research and innovation and ensures continuous engagement in the scholarly activities in the pursuit of innovation, creativity, and excellence

Shared governance

University encourages shared decision-making through a process that rests upon collaborative consultation, open flow of information, diverse involvement, and collective deliberations of all stake holders

Social responsibility
University creates and nurtures an inclusive environment where everyone can develop their full potential and contribute to the interest of the society.

Environmental responsibility
University is acutely aware of its environmental responsibilities and embraces principle of sustainable development to ensure that any adverse environmental impact of its activities is minimized.

Service
University seeks to serve the diverse, personal, and professional development needs of its constituents andencourage habit of engagement, caring, and civic responsibility by emphasizing on a connect between service, excellence, and career growth.

1.2 Broad Based Goals and Strategic Plan
  Broad based Goals and strategic plan describe the desired results of the various academic and operational activities and establish the foundation for assessment. These Goals are broad, clear, and a general statement of what the University intends to accomplish in terms of learning and operational effectiveness. It describes the general aims and aspirations of the University. Our broad-based goals are

  1. Educational Excellence
  2. Holistic Development of Students
  3. Innovation & Research Excellence
  4. Intellectual Capital Enhancement
  5. Maintain High Ethical Values and Foster Social & Environmental Responsibility

6. Internationalization
7. Attaining & Retaining Accreditations and Enhance Rankings
8. Building Strong Industry Linkages and Alumni Network
9. Enhance employability and entrepreneurial capabilities among students
10. Adopt Good Governance

Each broad-based goal has multiple strategic initiatives and evidence. Strategic initiatives and evidence are articulated for each goal in order to describes in precise and measurable terms the specific, observable, and desired results pertaining to student learning and the operational effectiveness

The broad-based goals are consistent with the mission of the University. The University's broad-based goals are blueprint for implementing the mission, setting targets, and developing measurable outcomes.

The Broad-based goals at Amity University are articulated from the University's Objectives. These Objectives flow from the Mission and vision of the University and are associated with, contribute to and mapped to some aspect of the University's mission

2 University Graduate Attributes

Amity University students gain an impressive range of knowledge and skills whilst at University. To make these clear to our students and to the future employers of students, **'The Amity Graduate' attributes**' have been identified as a part of our commitment towards supporting student's development.

Graduate Attributes are central to the design, delivery and assessment of student learning in all faculty of Management Studies at the University. These University Graduate attributes are as follows:

#	Graduate Attributes
1	Knowledge & Expertise of a Discipline
2	Research and Enquiry
3	Information & Digital Literacy
4	Problem Solving
5	Communication
6	Behavioral Skills, Teamwork and Leadership
7	Global Citizen
8	Ethical, Social and Professional Understanding
9	Employability, Enterprise & Entrepreneurship
10	Lifelong Learning

The Graduate attributes flow from university level to domain level, from domain level to institution level, from institution to programme level. For each programme ion the management domain, graduate attributes are defined, and the programme aims to inculcate these attributes in the students during their course of study.

2.1 Introduction to Domain/ Faculty of Biosciences and Biotechnology:

The scope of Biosciences and related fields in India has witnessed rapid progress in recent years to become one of largest in the world. Considering the wide diversities in the system there is a need to enhance its quality, standard and relevance so that graduates passing out from the system can meet the global challenges of 21st century ahead of them. Biosciences and related courses enable students to develop skills that help them to turn out as excellent future researchers, academicians, and entrepreneurs. With specialization in different areas, courses under Bioscience's domain prepare students to face the constantly advancing scientific world and impart effective research skills. Biosciences and related studies should emphasize not just in creating good professionals but also on improving and enhancing existing skills while passing on research competence to students.

Attention should be laid on aspects such as enhancing the knowledge base, creating highly skilled human resource, generation of innovative products and technologies leading to the upliftment of society.

The potential areas of research in Biosciences and Biotechnology are so vast that it is not possible to make a comprehensive list. Further, new areas of study emerge continuously. However, an indicative list is described under:

Agriculture: Transgenic of rice, wheat, cotton, potato, and vegetables. Higher productivity

Basic research: On all aspects of molecular biology, genetics, genomics, proteomics, and neurosciences

Bioengineering of crops for biofuels and bioenergy, Bio-fertilizers and bio-pesticides

Bioinformatics: Algorithm design and development, software and tools for data mining and data warehousing applications. Strengthening infrastructure for handling complex and computationally intensive problems. Biological Data Curation, phylogenetics. Setting up dedicated network centres for developing data warehouses. Exploitation of microbial genome information. Training competent personnel.

Bioprospecting and Molecular Taxonomy: Prospecting, molecular characterisation and documentation of economically and ecologically important hotspots of biodiversity in the country.

Biotechnology for societal development: Implementing projects for massive employment generation

Development of diagnostics: For major diseases, genetic disorders, cancer, tuberculosis, HIV, malaria, and neurological disorders

Environment and Biodiversity: Many industrial materials like building materials, fibers, dyes, rubber and oil derive directly from biological sources. Biodiversity is also important to the security of resources such as water, timber, paper, fiber, and food.

Human Resource Development: Training teachers, technicians, scientists, industrialists, IPR experts, and so on covering biotechnology research and commercialization.

Industry: More public-private partnerships for developing joint research and development programmes for commercially viable projects.

Low-cost therapeutics: Developing new vaccines, diagnostics, drugs and drug delivery system; to produce low-cost, small proteins and therapeutics using plants and animals as bioreactors

Life resources: Fisheries, oil, gas, minerals, sand, gravels, renewable energy sources are some of the Life resources that find their applications in Life tourism, waste disposal and detoxification, Carbon dioxide capture and storage, habitats, nutrient recycling, water circulation and exchange, gas and climate regulation etc.

Medical Biotechnology: Techniques like gene therapy, recombinant DNA technology and polymerase chain retort which employ genes and DNA molecules to diagnose diseases. There are various applications of Biotechnology such as Gene therapy, Biopharmaceuticals, Pharmacogenomics, genetic testing etc. in the field of medicine.

Medicinal and aromatic plants: Introduction and marketing of herbal products, Genetic engineering of medicinal plants

Metabolic engineering: Use of recombinant DNA technology

Neurosciences: Neurodegenerative diseases such as Alzheimer's, Parkinson's, and motor neuron disease, which would cover study of molecular genetics of these disorders. Neuro-AIDS, autism, and dyslexia.

Plant tissue culture: Providing tissue culture technology at the grassroots level to cover the most plant rich regions of the country which need massive afforestation and wasteland recovery. Utilisation of tissue culture for enrichment of genetic diversity. Genetic manipulation of cell culture in forestry for disease resistance and reduction of regeneration time.

Vaccine research for major livestock diseases: The industry /profession needs are continuously changing while the global environment of education around the world is witnessing changes.

The **Faculty of Biosciences and Biotechnology** ensures to provide ample opportunities to its students to excel in their careers and strives to fulfill its mission

"Mission: "To provide education at all levels in all disciplines of Bio-Sciences and Biotechnology and in the futuristic and emerging frontier areas of knowledge , learning and research and to develop the overall personality of students by making them not only excellent professionals but also good individuals with understanding and regards for human values , pride in their heritage and culture , a sense of right and wrong and yearning for perfection and imbibe attributes of courage of conviction and action."

2.2 Academic System

At Amity University Uttar Pradesh, academic excellence is the central focus of teaching and learning. The academic rigor and relevancy provide the students an advantage to grow into leaders in their chosen fields. Students can choose from more than 300 programs in more than 50 disciplines. Conferences, Workshops and Seminars are conducted throughout the academic year, with active participation from the Industry and Academia.

The academic atmosphere of the University is encouraging, engaging, equitable and non-discriminatory. The Students, Faculty and Staff work as a community, as Amitian's, for the holistic development of each and every student. Students are encouraged to participate in various co-curricular and extra-curricular National and International Competitions as well as in Military Training Camps.

Amity University, as per Guidelines of UGC and related regulatory bodies follows semester /year-based system of study. Degree nomenclature and credits for all the Programmes are consistent with levels of quality and rigor appropriate to higher education ensuring compliance with the norms and standards of all the relevant statutory and regulatory bodies. Evaluation of the students is done through appropriate mode of continuous evaluation during the semester and through end semester examinations.

Annual Academic Calendar & Semester System

Amity University follows semester system for conduct of classes. Annual Academic calendar have odd Semesters (I, III, V, VII etc) and even semesters (II, IV, VI, VIII etc.). Each semester consists of 15-18 weeks excluding examination period and semester break period. Odd Semesters normally commence in the month of July/August and end in October/November and Even Semesters commence in December and end in April/May on specified dates mentioned in Annual Academic Calendar. The Summer Break normally covers practical training, field based / industry centric courses called **Non- Teaching Credit Courses** (NTCC). Duration of summer break is variable in length for different Programmes

Date of Commencement of each semester and last teaching day of semester is finalized well in advance in the detailed 'Annual Academic Calendar' for a programme in accordance with 'Block Academic Calendar' of the University

2.3 Choice Based Credit System & Flexi Timings

To maintain uniformity in all the programmes and at the same time offer more choice of courses to students, **Model Framework** for Programme Structure for all UG and PG programme / degree has been defined which includes semester-wise credit distribution for various course types. The courses and credits offered by the institutions in the programme structure are as per the model framework.

Amity University offers the **Choice Based Credit System** (CBCS) in its academic curriculum, in its endeavor to provide quality education. Under this system, the students can register for courses according to their interests, academic abilities and career aspirations. Students decide their academic plan and alter it, if required, in their academic progression in pursuit of degree.

A **Master Academic Planning Worksheet (APW)** is available on AMIZONE for students as per the Programme Structure and Model Framework for their respective programme. Student is expected to earn the minimum number of credits for a course type/ semester as prescribed in the model framework of their programme.
A student is required to choose the courses from the offerings and make their own Academic Planning worksheet. However, a student can choose 15% extra credits from the Specialisation Electives, Open Electives, Domain Electives, Outdoor Activity Based Courses (OABC) and FBL Electives in addition to the minimum prescribed credit units to choose interdisciplinary courses from other institutions/domains.

Apart from core, allied and Non Teaching Credit Courses which are compulsory in nature, ample options are available in the Master Academic Planning Worksheet for a semester, which help the students to make their own basket of courses to develop additional skills in there area of interest.

Students are also allowed to add or drop registered courses to balance workload to optimize or maximize grade points, course substitution option, grade improvement, credit transfer for course migration as per the University Policy on Credit System, Academic Credit Hour and Time Tabling.

Flexi Timings

Flexi Time tabling help students to choose the courses they want to study and when to study from the slot-based timetable, coupled with on-line Course Registration, through Amizone, in each semester.
The Institutions/departments prepare, review and publish the weekly class time-table on AMIZONE prior to the start of each semester to ensure that all classes are scheduled for the minimum number of session(s) of 50 minutes each. The Students select and register for the course time slot. Students make their own time-table and each student in a class may have a different timetable of his / her own.

3. Approach to Curriculum Review & Development

As a major objective of Degree programmes in Biosciences and Bioteechnology domain is to lay special emphasis on educating/preparing the students well for being able to demonstrate the following abilities:

(a) Effective application of research skills
(b) Working in research groups
(c) Developing decision making skills
(d) Effective communication skills and participation in teamwork.
(e) Fulfillment of professional, social, and ethical responsibilities.
(f) Sensitivity to environmental issues and concerns.
(j) Planning, development and implementation of strategies for life-long learning. n.

These requirements call for the following objectives to the Approach to Curriculum relating to programmes in biosciences Degree in the country:

1) *Preparation:* To prepare the students to excel in various educational programmes or to succeed in industry / Technical profession through further education/training.

2) *Core Competence:* To provide the students with a solid foundation in research concepts.

3) *Breadth:* To train the students with knowledge to comprehend, analyze and deal with ever growing scientific world.

4) *Professionalism:* To inculcate in the students professional/ethical attitude, effective laboratory skills, multidisciplinary approach and to relate research issues to a broader context.

5) *Learning Environment:* To provide the students with academic environment of excellence, leadership, ethical guidelines and life-long learning needed for a long/productive career.

The programme structure for each programme is developed carefully ensuring that the content and curriculum is current and appropriate to the programmes objectives and learning outcomes.

Content, Curriculum and Scheme of Examinations

Content, Curriculum and scheme of examinations are the most important components of academic excellence and their development and approval is a detailed exercise which involves screening at various levels.

Heads of Institutions/Departments constitute **Course Review Committee (CRC)**, **Area Advisory Board (AAB) and Programme Review Committee (PRC)** to develop/ review the curriculum and programme structure respectively.

The Course Review Committee (CRC) defines the course Objectives, course contents, and Students Learning Outcomes and assessment tools/components for each course.   The recommendations of the CRC are put up to specific Area Advisory Board

Area Advisory Board is constituted to ensure that the course and syllabus are as per the needs of profession / industry at a specific level (UG/PG) and to benchmark as per the National/International curriculum.

The Programme Review Committee (PRC) defines the Programme Educational Objectives (PEOs), Programme Operational Goals, Programme Learning Outcome (PLO), Programme Structure (PS) and the Assessment plan for evaluating operational and educational outcomes, based on inputs from various stakeholders.
Recommendations of AAB and PRC are put up to the "Board of Studies" (BoS)

Board of Studies (BoS) reviews and recommends appropriate Programme structure, curricula & syllabi designed and developed by PRC and AAB.

The recommendations of BoS along with the final Programme structure (Programme Educational Objectives (PEOs), Programme Learning Outcomes (PLOs), and Outcome assessment plan), Course curriculum, and scheme of examinations for each course are further put up for the final approval of Academic Council.

After the approval of Academic council, the Programme Structure, Course curriculum, scheme of examinations and other relevant information is uploaded on Amizone for student access

3.1 Institutions / Programmes

   a. Faculty of Biosciences and Biotechnology has following institutions/Programme in various campuses of the University:

#	Institution
Campus - Noida	
1	Amity Institute of Biotechnology (AIB)
2	Amity Institute of Anthropology (AIA)
3	Amity Institute of Microbial Biotechnology (AIMB)
4	Amity Institute of Life Science and Technology (AIMST)
5	Amity Institute of Virology and Immunology (AIVI)
6	Amity Institute of Molecular Medicine & Stem Cell Research (AIMMSCR)
Campus – Greater Noida	
1	Amity Institute of Biotechnology (AIB- AUGN)
Campus - Lucknow	

	Amity Institute of Biotechnology (AIBL)

b. Programmes Offered

Sl. No.	Programme Groups/ Programmes	Noida Campus	Greater Noida Campus	Lucknow Campus
1	Three Years Bachelors'(Honors) Programmes	B. Sc.(H) Zoology, B. Sc.(H) Biotechnology, B. Sc.(H) Biotechnology-3C, B. Sc.(H) Medical Biotechnology. B. Sc.(H) Medical Biotechnology-3C B.Sc (H) Antropology B.Sc (H) Microbiology BSc (H) Life Sciences B.Sc (H) Life Science	B. Sc.(H) Biotechnology	B. Sc.(H) Biotechnology
2	Four Years Bachelors'(Honors) Programmes	B. Sc.(H) Medical Biotechnology. B. Sc.(H) Medical Biotechnology-3C		
3	Four Years Bachelors' Programmes	B. Tech. Biotechnology, B. Tech. Biotechnology-3C B. Tech. Biotechnology-Evening B. Tech. Bioinformatics	B. Tech. Biotechnology	B. Tech. Biotechnology

3.2 Graduate Attributes – University and Domain Level
Domain Graduate attributes – The graduate attributes are defined at the domain level and the programme level aligned with the University Graduate Attributes. The domain graduate attributes for the **Faculty of Biosciences and Biotechnology** are given as under:

Sr.No	University Graduate Attribute	Domain Graduate Attributes	Indicators
1	Knowledge & Expertise of a Discipline	Knowledge of Biosciences and Biotechnology	he student will apply knowledge of life sciences and cognate disciplines to find solutions for

2	Research and Enquiry	Exploration and Investigation	The student will identify, formulate, research literature, review existing knowledge and
3	Information & Digital Literacy	Modern IT Tool Usage	The student will apply modern IT tools for acquisition and analysis of data.
4	Problem Solving	Design / Development of Solutions	The student will use research-based knowledge and scientifically proven methodology including design of experiments and models and synthesis of the information to provide valid conclusions.
5	Communication	Communication	The student will develop ability to communicate effectively. communication skills
6	Behavioral Skills, Teamwork and Leadership	Individual and Team Work	The student will relate effectively as an individual, and as a member in diverse teams in multidisciplinary settings.
7	Global Citizen	Global Citizen	The student will build skills to evolve into a responsible global citizen.
8	Ethical, Social and professional understanding	Ethics	The student will apply ethical principles along with culturally sensitive issues and responsibilities.
9	Employability, Enterprise & Entrepreneurship	Project Management and Entrepreneurship	The student will demonstrate knowledge and understanding of management principles and apply these to projects and ventures.
10	Lifelong Learning	Lifelong Learning	The student will recognize the need for independent and life-long learning.
11	Other	Environment and Sustainability	The student will solve issues related to environment and sustainable development.
12	Other	Life sciences , Biotechnology and Society	The student will apply the knowledge of biosciences for the benefit of society.

The Graduate attributes flow from University level to domain level, from domain level to institution level, from institution to programme level. For each programme in the FBB domain, graduate attributes are defined and the programme aims to inculcate these attributes in the students during their course of study. The programme level graduate attributes are clearly defined and uploaded in the programme structure of programmes attached as **Appendix b1-b3**

4. Domain Educational and Operational Goals

The broad based goal of the domain is aligned with the University Goals and Objectives. The Broad based goals are broadly defined as Domain Educational Objectives and Operational Objectives as under:

a. Educational Objectives:

Sl. No	Educational Goal
1	The student shalll be able to develop knowledge and skills to integrate principles of Biosciences and Biotechnology to achieve academic excellence.
2	The student shall demonstrate research skills and conduct innovative research in thrust areas benefitting society which will enhance the intellectual capital of the domain.
3	The student shall be able to use and apply latest IT tools to analyse and interpret scientific data.
4	The student shall be able to comprehend and interpret research in biosciences and biotechnology in order to solve scientific problems.
5	The student shall be able to develop effective communication skills to enhance interpersonal relationship.
6	The student shall be able to develop leadership skills and perform responsibly as an individual as well as in a team while maintaining accountability and output.
7	The student shall be able to develop global citizenship skills to build a sustainable world community.
8	The student shall be able to demonstrate ethical behaviour and develop sensitivity towards environmentally and culturally sensitive issues of the society.
9	The student shall be able to develop networking and entrepreneurship skills and create a strong network with the industry and alumni.
10	The student shall be able to evaluate and reflect the virtue of lifelong learning.
11	The student shall be able to recognize the need for environmental conservation and develop sustainable technologies.
12	The student shall be able to integrate various aspects of biosciences to achieve holistic and societal development.

b. Operational Objectives:

Sl. No	Operational Goal
1	FBB intends to provide educational excellence in teaching/academic delivery.
2	FBB will provide academically conducive environment for holistic development of students.
3	FBB will facilitate environment for innovation and research excellence for the intellectual growth of faculty and students
4	FBB will facilitate cultivation of core values of the university and ethical conduct amongst students, faculty and staff.
5	FBB will encourage cultural diversity and a sense of social and environmental responsibility.
6	FBB will provide ample opportunities for international exposure to faculty and students.
7	FBB will formulate an alumni network and build strong relationship with industry while proactively seeking suggestions on curricula and training.
8	FBB will facilitate employment opportunities and also support students to start their own ventures.

S.No.	Courses	Sem 1 (CU)	Sem 2 (CU)	Summer Break (CU)	Sem 3 (CU)	Sem 4 (CU)	Summer Break (CU)	Sem 5 (CU)	Sem 6 (CU)
9	FBB will implement good governance in discharge of responsibilities and execution of policies and programs.								

5. Programme Model Framework for Bachelor's Programme

The Bachelor of Science Program in life science is a full-time multidisciplinary undergraduate program of three-year duration. This program incorporates the capability to integrate theory, technical information, and appropriate research methods in effectively analyzing and solving biological issues and make the research more productive, time saving and cost effective. It provides students an appropriate level of communication skills and develop entrepreneurship skills to effectively disseminate research and technical information, including the practical implications of research analysis. Students of this course develop an ability to put what they learn in the greater context of the vibrant diversity of biological fields and pursue higher studies.

The Model framework of Programme Group of the respective Bachelor's programme of the domain for designing the programme structure is given as under:

Group 1: (Semester-Wise Course 'Credit distribution)

Three Years Bachelor (Honors) Programme in 2018-21 Batch

S.No.	Courses	Sem 1 (CU)	Sem 2 (CU)	Summer Break (CU)	Sem 3 (CU)	Sem 4 (CU)	Summer Break (CU)	Sem 5 (CU)	Sem 6 (CU)
1	Human Social Sciences & Management Courses	Min :0 Max :0	Min :0 Max :0	1	Min :0 Max :0	Min :0 Max :0	3	Min :0 Max :0	Min :0 Max :0
2	Core Courses	Min :12 Max :16	Min :11 Max :16		Min :16 Max :18	Min :12 Max :15		Min :8 Max :11	Min :4 Max :8
3	Allied Courses	Min :4 Max :8	Min :4 Max :8		Min :4 Max :6	Min :4 Max :4		Min :0 Max :0	Min :0 Max :0
4	Specialisation Elective Courses	Min :0 Max :0	Min :0 Max :4		Min :0 Max :0	Min :6 Max :9		Min :9 Max :12	Min :8 Max :12
5	Domain Elective Courses	Min :0 Max :0	Min :0 Max :2		Min :0 Max :2	Min :0 Max :2		Min :0 Max :0	Min :0 Max :0
6	Open Elective Courses	Min :0 Max :0	Min :0 Max :2		Min :0 Max :2	Min :0 Max :2		Min :0 Max :0	Min :0 Max :0
7	Non Teaching Credit Courses	Min :0 Max :0	Min :0 Max :0		Min :1 Max :1	Min :0 Max :0		Min :3 Max :3	Min :6 Max :6
8	Mandatory Courses	Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0

#	Course								
9	Value Addition Courses	Min :1 Max :1	Min :1 Max :1		Min :1 Max :1	Min :1 Max :1		Min :1 Max :1	Min :1 Max :1
	➡Behavioural Science								
	Value Addition Courses ➡Communication Skills	Min :1 Max :1	Min :1 Max :1		Min :1 Max :1	Min :1 Max :1		Min :1 Max :1	Min :1 Max :1
	Value Addition Courses ➡Foreign Business Language	Min :2 Max :2	Min :2 Max :2		Min :2 Max :2	Min :2 Max :2		Min :2 Max :2	Min :2 Max :2
10	Outdoor Activity Based Courses	Min :0 Max :0	Min :0 Max :0		Min :0 Max :1	Min :0 Max :1		Min :0 Max :2	Min :0 Max :2
11	SAP Courses (Optional)	Min :0 Max :0	Min :0 Max :0		Min :0 Max :14	Min :0 Max :15		Min :0 Max :14	Min :0 Max :14
12	Employability & Skill Enhancement Courses	Min :0 Max :0	Min :0 Max :0		Min :0 Max :2	Min :0 Max :2		Min :0 Max :0	Min :0 Max :0
13	Industry Specific Courses	Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :8		Min :0 Max :15	Min :0 Max :8
14	MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)	Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0		Min :0 Max :4	Min :0 Max :4
	Value Addition Courses ➡Professional Ethics	Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0		Min :2 Max :2	Min :0 Max :0
	Total	**24**	**26**	**1**	**27**	**30**	**3**	**29**	**26**

Minimum Credits Prescribed For Programmes : 164

Remarks : Minimum Credit Units (CUs) prescribed for programmes (164) = Sum of credit units of all semester (162 CUs) + 02 flouting CUs for "Outdoor Activity Based Courses (OABC)" to be compulsory opted by students during the programme for completion of degree.

Three Years Bachelor (Honors) Programme in 2019-22 Batch

S.No.	Courses	Sem 1 (CU)	Sem 2 (CU)	Summer Break (CU)	Sem 3 (CU)	Sem 4 (CU)	Summer Break (CU)	Sem 5 (CU)	Sem 6 (CU)
1	Human Social Sciences & Management Courses	Min :0 Max :0	Min :0 Max :0	1	Min :0 Max :0	Min :0 Max :0	3	Min :0 Max :0	Min :0 Max :0
2	Core Courses	Min :12 Max :16	Min :11 Max :16		Min :16 Max :18	Min :12 Max :15		Min :8 Max :11	Min :4 Max :8
3	Allied Courses	Min :4 Max :8	Min :4 Max :8		Min :4 Max :6	Min :4 Max :4		Min :0 Max :0	Min :0 Max :0
4	Specialisation Elective Courses	Min :0 Max :0	Min :0 Max :4		Min :0 Max :0	Min :6 Max :9		Min :9 Max :12	Min :8 Max :12
5	Domain Elective Courses	Min :0 Max :0	Min :0 Max :2		Min :0 Max :2	Min :0 Max :2		Min :0 Max :0	Min :0 Max :0
6	Open Elective Courses	Min :0 Max :0	Min :0 Max :2		Min :0 Max :2	Min :0 Max :2		Min :0 Max :0	Min :0 Max :0
7	Non Teaching Credit Courses	Min :0 Max :0	Min :0 Max :0		Min :1 Max :1	Min :0 Max :0		Min :3 Max :3	Min :6 Max :6
8	Mandatory Courses	Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0
9	Value Addition Courses ➡Behavioural Science	Min :1 Max :1	Min :1 Max :1		Min :0 Max :0	Min :3 Max :3		Min :0 Max :0	Min :0 Max :0
	Value Addition Courses ➡Communication Skills	Min :1 Max :1	Min :1 Max :1		Min :3 Max :3	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0
	Value Addition Courses ➡Foreign Business Language	Min :2 Max :2	Min :2 Max :2		Min :2 Max :2	Min :2 Max :2		Min :2 Max :2	Min :2 Max :2

.No.	Courses	Sem 1 (CU)	Sem 2 (CU)	Summer Break (CU)	Sem 3 (CU)	Sem 4 (CU)	Summer Break (CU)	Sem 5 (CU)	Sem 6 (CU)
10	Outdoor Activity Based Courses	Min :0 Max :0	Min :0 Max :0		Min :0 Max :2	Min :0 Max :2		Min :0 Max :2	Min :0 Max :2
11	SAP Courses (Optional)	Min :0 Max :0	Min :0 Max :0		Min :0 Max :14	Min :0 Max :15		Min :0 Max :14	Min :0 Max :14
12	Employability & Skill Enhancement Courses	Min :0 Max :0	Min :0 Max :0		Min :0 Max :2	Min :0 Max :2		Min :0 Max :0	Min :0 Max :0
13	Industry Specific Courses	Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :8		Min :0 Max :15	Min :0 Max :8
14	MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)	Min :0 Max :5	Min :0 Max :5		Min :0 Max :5	Min :0 Max :5		Min :0 Max :11	Min :0 Max :10
	Value Addition Courses ➡Professional Ethics	Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0		Min :2 Max :2	Min :0 Max :0
15	Apprenticeship	Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :24
	Total	**24**	**26**	**1**	**28**	**31**	**3**	**27**	**24**

Minimum Credits Prescribed For Programmes : 162

Remarks : Minimum Credit Units (CUs) prescribed for programmes (162) = Sum of credit units of all semester (160 CUs) + 02 flouting CUs for "Outdoor Activity Based Courses (OABC)" to be compulsory opted by students during the programme for completion of degree.

Three Years Bachelor (Honors) Programme in 2020-23 Batch

.No.	Courses	Sem 1 (CU)	Sem 2 (CU)	Summer Break (CU)	Sem 3 (CU)	Sem 4 (CU)	Summer Break (CU)	Sem 5 (CU)	Sem 6 (CU)
1	Human Social Sciences & Management Courses	Min :0 Max :0	Min :0 Max :0	1	Min :0 Max :0	Min :0 Max :0	3	Min :0 Max :0	Min :0 Max :0
2	Core Courses	Min :12	Min :11		Min :16	Min :12		Min :8	Min :4

#									
		Max :16	Max :16		Max :18	Max :15		Max :11	Max :8
3	Allied Courses	Min :4 Max :8	Min :4 Max :8		Min :4 Max :6	Min :4 Max :4		Min :0 Max :0	Min :0 Max :0
4	Specialisation Elective Courses	Min :0 Max :0	Min :0 Max :4		Min :0 Max :0	Min :6 Max :9		Min :9 Max :12	Min :8 Max :12
5	Domain Elective Courses	Min :0 Max :0	Min :0 Max :2		Min :0 Max :2	Min :0 Max :2		Min :0 Max :0	Min :0 Max :0
6	Open Elective Courses	Min :0 Max :0	Min :0 Max :2		Min :0 Max :2	Min :0 Max :2		Min :0 Max :0	Min :0 Max :0
7	Non Teaching Credit Courses	Min :0 Max :0	Min :0 Max :0		Min :1 Max :1	Min :0 Max :0		Min :3 Max :3	Min :6 Max :6
8	Mandatory Courses	Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0
9	Value Addition Courses ➡Behavioural Science	Min :0 Max :0	Min :0 Max :0		Min :3 Max :3	Min :3 Max :3		Min :0 Max :0	Min :0 Max :0
	Value Addition Courses ➡Communication Skills	Min :3 Max :3	Min :3 Max :3		Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0
	Value Addition Courses ➡Foreign Business Language	Min :2 Max :2	Min :2 Max :2		Min :2 Max :2	Min :2 Max :2		Min :2 Max :2	Min :2 Max :2
10	Outdoor Activity Based Courses	Min :0 Max :0	Min :0 Max :2		Min :0 Max :2	Min :0 Max :2		Min :0 Max :2	Min :0 Max :2
11	SAP Courses (Optional)	Min :0 Max :0	Min :0 Max :0		Min :0 Max :14	Min :0 Max :15		Min :0 Max :14	Min :0 Max :14
12	Employability & Skill Enhancement	Min :0 Max :0	Min :0 Max :0		Min :0 Max :2	Min :0 Max :2		Min :0 Max :0	Min :0 Max :0

S.No	Courses								
	Courses								
13	Industry Specific Courses	Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :8		Min :0 Max :15	Min :0 Max :8
14	MOOC (Amity On - line / NPTEL / SWAYAM / Future Learn)	Min :0 Max :5	Min :0 Max :5		Min :0 Max :10	Min :0 Max :11		Min :0 Max :11	Min :0 Max :10
	Value Addition Courses ➡Professional Ethics	Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0		Min :2 Max :2	Min :0 Max :0
15	Apprenticeship	Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :0		Min :0 Max :0	Min :0 Max :24
	Total	**25**	**27**	**1**	**28**	**31**	**3**	**27**	**24**

Minimum Credits Prescribed For Programmes : 164

Remarks : Minimum Credit Units (CUs) prescribed for programmes (164) = Sum of credit units of all semester (162 CUs) + 02 flouting CUs for "Outdoor Activity Based Courses (OABC)" to be compulsory opted by students during the programme for completion of degree.

6. Programme Educational Objectives (PEOs)

Programme Educational Objectives (PEOs) lay the foundation for what students are expected to do, know or value as a result of the educational experience. Objectives are the critical link between gaps and outcomes. Objectives guide the choice of content, the educational format, pedagogy and methodologies, and the methods for assessment.

The various levels that an objective is written, beginning with the lowest level and advancing to the highest are as follows:

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

Programme – <u>B. Sc. (H) Life Sciences</u>

Educational Goals		
1.	The student shall be able to **develop** knowledge and skills to integrate principles of Biosciences and Biotechnology to achieve academic excellence	
2.	The student shall be able to choose **self–directed and active learning** through strong intellectual engagement in independent work relevant to Biosciences and Biotechnology discipline.	
3.	The student shall **demonstrate scientific enquiry** and research aptitude to conduct innovative research in thrust areas of biosciences, benefitting society, which will enhance the intellectual capital of the domain	
4.	The student shall be able to efficiently use and **apply information and communication** technologies and participate in collaborative networks for developing requisite skills of Industry 4.0	
5.	The student shall formulate **critical thinking**, interpret and comprehend research-based knowledge to design and synthesize solutions to scientific problems in biosciences and allied areas.	
6.	The student shall be able to employ effective listening and **communication skills** to enhance interpersonal relationship.	
7.	The student shall be able to combine **scientific creativity and reflective thinking** to critically evaluate innovative ideas in life sciences for developing processes and products relevant to industry/societal needs.	
8.	The student shall be able **to compare, contrast and analyze** data in order to take appropriate and effective decisions.	
9.	The student shall be able to attain **leadership skills** and perform responsibly as an individual as well as in a team while being accountable and result oriented.	
10.	The student shall **demonstrate competence** in a cross-cultural environment and evolve as a responsible global citizen.	
11.	The student shall practice ethical behavior and **demonstrate professional integrity** in their conduct.	
12.	The students shall be able to **acquire social and emotional skills** to work effectively with diverse group of people in multi-cultural environment and situations.	
13.	The student shall be able to define **their career aspirations** and work towards achieving the same by engaging in developing appropriate skills and competencies in their chosen profession (corporate career, student start up, family business, higher education etc.).	
14.	The student shall be able to **evaluate and reflect the virtue of lifelong learning**.	
15.	The student shall be able to **analyze and implement the initiative to conserve natural resources** and develop sustainable technologies by using knowledge and experience of their discipline.	

7. Intended Programme Learning Outcomes (PLOs)

Intended Programme learning outcomes are statements that describe the desired learning that students should have acquired and should be able to demonstrate at the end of their course of study. Through these statements, programmes identify what students should know and be able to do as a result of completing their degree programs.

Consequently, statements of intended learning outcomes clearly articulates the intended knowledge, skills, abilities, competencies, attitudes, and values that characterize the essential learning required of a

graduate of a particular programme of study.

Each Learning outcome is measurable and includes appropriate action verb relating to the desired action or performance associated with the intended cognitive level. The programme learning outcome (PLOs) are well defined and given in the programme structure of each programme.

Programme – B. Sc. (H) Life Sciences

Programme Learning Outcomes:

PLO 1: The student will be able to define integrated approach to knowledge factual and theoretical basis of Life sciences on the molecular, cellular, and organism levels.

PLO 2: The student will develop critical skills for the analysis of complex Life sciences problems to reach sustained conclusions using logical principles.

PLO 3: The student will be able to use technology driven tools to show problem solving skills to develop, plan and implement practical solutions within a diverse range life sciences.

PLO 4: The student will use knowledge and scientifically proven methodologies to perform experiments and result interpretation for the generation of informative data to provide meaningful definitive conclusions.

PLO 5: The student will be able to develop effective communication skills on various disciplines of Life sciences with community, apply knowledge to become effective written and oral communicators in their profession with tenacity in multidisciplinary settings

PLO 6: The student will demonstrate effectively as an individual and as a member or leader of team in diverse disciplines and cultures of life sciences for achieving logical rationale.

PLO 7: The student will recognize the responsibility of being an independent thinker with an aptitude to demonstrate translation of learning into action.

PLO 8: The student will apply to intercede with in the defined limits of bioethical principles to be implemented in the Life sciences research and academia.

PLO 9: The student will demonstrate knowledge and understanding of the technical and management principles in order to achieve the organizational goal in multidisciplinary environments.

PLO 10: The student will add to the technical interpretations in the form of devices, gadgets, apps for data accumulation and data dispersal which will emerge as learning tools in time to come

PLO 11: The student will demonstrate knowledge and understanding of human biological system and their place in the natural environment, recognize the significance of societal and environmental contexts with special stress on sustainable development.

PLO 12: The student will be able to transform and accumulate all educational learning into big data systems, learn to digitalize data and also integrate life's processes into handy tools.

8. Course Delivery & Pedagogy

Course Delivery may use a combination of the following formats: Lectures, classroom discussions, case studies, internship, term papers, role plays and dissertations.

Students are provided with curriculum and session plan of all the courses that they have chosen in their Academic Planning Worksheet. A Master Session Plan covers the following:

- Objectives of the course
- Session-wise details of topics
- Plan type (L-T-P) and reference material for each topic in the module
- Pedagogy to be adopted
- Prerequisites, if any

- Required readings, additional readings, and assignments
- Student learning Outcomes for each module
- Assessment component used to assess the SLO's for each module
- Scheme of evaluation and weightage of each assessment component

Pedagogy

The approach to pedagogy combines fieldwork, case studies and instrumented feedback with a strong emphasis on concepts and theory. A continuous quality interface with industry through internships, industrial visits, participation in business competitions, group discussions, workshops, seminars, etc. is encouraged

To stimulate, motivate and foster learning culture, diversified modes of content delivery are adopted by the faculty, in order to help students in achieving learning goals and to attain desired learning outcomes.

The objectives of focusing on the implementation of innovative teaching methodologies in traditional classrooms are:

- To make an effective combination of classroom activities and other instructional strategies ensuring that the students achieve the learning goals set by the teacher.
- To develop flexibility in content delivery
- To foster learning through several modes of information processing.
- To develop student's understanding of application and implementation of classroom learning
- To cater for the range of learning needs of students
- To enhance students skills and competencies
- To promote students participation and engagement
- To shift focus from 'surface learning to 'deep learning'
- To emphasize on more student centric interactive teaching methods
- To improve teaching to match students needs and learning style
- To involve students in higher level of thinking
- To provide students an opportunity to bridge gap between academic theory and real world practices

Some of the Teaching Learning approaches adopted by the faculty are as follows:

#	Approaches	Description
1	Blended Learning	A mixed-mode of instruction strategy that creates an integrated approach for both teachers and students by the convergence of face-to-face classroom methods and computer-mediated activities
2	Case Based Learning	A teaching approach that refers to the analytical thinking and reflective judgment of learners by reading and discussing complex, real-life scenarios
3	Cooperative Learning	Students work in groups to complete tasks collectively toward academic goals
4	Field Based Learning	In field-based learning, students, guided by faculty, take up a professional role and work directly with organizations to solve real problems and offer feasible solutions

5	Inquiry/ Research Based Learning	Students make observations, collect, analyze, and synthesize information, and draw conclusions to develop problem-solving skills which can be applied to situations that students will encounter in future
6	Lab Based Learning	Integrates theory with practice and blending other active learning strategies such as web or computer based learning
7	Problem Based learning	Students collaboratively work toward the resolution of complex and challenging problem
8	Community Service Learning	A technique of experiential learning that fosters a partnership between educational institutions and community organizations to facilitate a greater learning experience for students
9	Just-in-Time Teaching	Use of brief web-based questions delivered by faculty before a class meeting. Students' responses are reviewed few hours before class and are used to develop classroom activities addressing learning gaps
10	Role Plays	A problem situation is briefly acted out so that the individual student can identify with the characters and empathize with them.

Students have access to an unparalleled range of extra-curricular and co-curricular activities to develop various competencies & skills and develop an extra edge to face the challenges that the corporate world offers.

9. A. Competency – Role Matrix

A competency-role matrix is developed for each programme which is a list of skills and behaviours that a Biosciences and Biotechnology graduate needs to exhibit in order to perform well in their careers. The competencies are defined in consideration with the requirement of the industry and to ensure that the students are industry ready by the end of their programme of study.

This competency – role matrix helps students in understanding the different competencies required to observe various job roles. Some competencies are generic in nature and applicable to the full range of employers in the sector, and across the wide variety of roles appropriate to graduates. There are some specific competencies which are appropriate to the specific profession. The Competency – Role matrix is defined in the following format:

Job Role / Competencies	Role 1	Role 2	Role 3	Role n	
Competency 1					
Competency 2					
Competency 3					
Competency 4					
Competency n					

See the annexure b1-b3.

9.B. Employability of graduands (Specify Industry/Sector and Relevant Job Role) :

Relevant Job Role → Industry/Sector ↓	Technician in fisheries colleges	Fish Farmer	Hatchery Technician	Field assistant
Agriculture	☐	☐	☐	☐
Biotechnology	☐	☐	☐	☐
Education	☐	☐	☐	☐
Consultancy firms	☐	☐	☐	☐
Food Processing	☐	☐	☐	☐

10. Learning Resources

Amity University has appropriate information & learning resources to support educational objectives of all our management programmes. The University has very rich learning resources as:

- Central and Institutional Library
- Online Journals
- Computer Labs

Appropriate number of books needed for study and teaching as recommended by the course faculty and other experts are maintained in the library.

Amity Central Library

The students and Faculty members have an open access to library during the operating hours. University has more than 3,00,000 books and 700 journals

- Amity University Central Library's sprawling building has three floors of resources which has more than 2,00,000 books, 17,000 e-journals, CDs and many other useful reference materials for students to get knowledge and expertise in their respective fields.

- The 58000 sq ft of knowledge is organized and managed by a dedicated team of Library professionals who are available to guide the students. There are cubicles and Research Rooms for PhD Scholars.

- A large number of computer terminals with Wi-Fi enabled internet facilities is available for students to access the online resources in the Library and search the catalogue of books in KOHA, an advanced Library Software System. They can be checked in the Amity Portal (library.amizone.net).

- Students can search for details of books by title, author, subject or keywords to get to the relevant resource for borrowing.

- The Circulation staff helps in issuing and returns of books and the latest new technological system helps them to self -check in and check out for easy circulation.

In addition to central library some departments have departmental libraries. Amity is also a member of the **British Council Library** and **American Library Centre.**

In addition to the libraries Amity University **has also subscribed to the following on-line journals. :**

a) **UGC- Infonet Digital Library Consortium – about 3559 leading journals**
Under this consortium Amity University has subscribed to a number of Online Journals that are available on Amizone (Intranet) from UGC – Infonet. Through this the Faculty and Students get access to world class online research articles, journals, research papers by the best Publishers, Universities, Research Institutes etc.

b) **EBSCO- host** offers a variety of proprietary of 2300 journals and full text and popular databases from leading information providers.
University is the Institutional Member of **DELNET**, a database that has been established with the prime objective of promoting resource sharing among the libraries through the development of a network of libraries.

c) **Scopus** is a bibliographic database containing abstracts and citations for academic journal article

d) **E-LEARNING STUDIO (**Accessing Knowledge Online): e-Learning Studios are for blended teaching-learning.

The libraries have subscriptions to on-line journals and databases in various areas of learning/subjects which are accessible through the intranet from all the terminals. There is a downloading facility for e-material.

The University has over 309 **stat-of-the-art labs** in various domains with high-end Research Equipments.

External Libraries:

Amity University is an educational member for various other professional / academic institutions. Students, Faculty and Staff members of the University are given access to avail/utilize the online library of such external institutions. Details of learning resources provided by some of such external libraries are as below:

- **The Association to Advance Collegiate School of Business (AACSB, USA)**

  o *BizEd: BizEd* is an award-winning, bi-monthly magazine on business education. *BizEd*articles include interviews with executives, challenges and trends facing business schools, business education news and insights, book reviews, professional development opportunities, and technology advancements in the classroom.

  o **eNEWSLINE and eNEWSLINE Live:** NEWSLINE is a bi-monthly electronic newsletter on business education. It includes business school news, articles from business school deans, data analysis, open business school positions, and more. eNEWSLINE Live is a bi-monthly live broadcast featuring guests from the management education industry.

  o **White Papers:** AACSB International produces a variety of white papers on specific topics for management educators. Topics have included distance learning, faculty qualifications, and Assurance of Learning. White papers are available to the general public for download.

- **Thomson Reuters, USA:** Following Intellectual Property are online accessible:
  - o Online Journals
  - o eBooks
  - o Webinars, etc.

IT Infrastructure at Amity:

As a hi-tech smart campus, Amity University at Noida & Lucknow have wireless broadband internet connectivity with over 75 kms. of fiber optic/ LAN cable backbone structure. Some of the features that it can boast of as part of its hi – tech IT infrastructure are:

- 600 MB Internet Bandwidth from multiple ISP to maintain redundancy and hassle free internet connectivity.
- 40 Servers are Virtualized through VM ware on HP Blades (HP-C3000 with BL 460).
- 24 TB of useable EMC NAS storage with fiber channel connectivity.
- One Network across the country. All Amity Campuses are connected through MPLS VPN of 4MB/2 MB link each.
- High end Catalyst CISCO 6500 Series Switches with Hot Standby Router Protocol (HSRP) for load balancing and high availability.
- Three Firewall box in redundant mode with high level of content/URL filtering and bandwidth management.
- Mac. Address base authentication for all Wi-Fi users and tracking.
- BGP Router with own IP Pool for bandwidth aggregation and load balancing.
- Campus is covered with high through put Wi-Fi with 400 Nos. APs Access point by using secured and managed Controller of Aruba.
- Centrally IT resource management, monitoring and communication over intranet in between campuses.
- Smart Camera Surveillance with IP Cameras through the Campus.
- Lecture Recordings & Live transmission of 'on demand' Class Lectures & Events over Intranet & Internet.

All the faculty members are provided with computers / laptops with internet browsing facility for the preparation of teaching, learning material and research in their respective departments.

11. **Outcome Assessment Plan- Direct and Indirect methods for Assessment of Programme Learning Outcomes –** An outcome assessment plan is developed to ensure that the Programme learning outcomes are assessed, each by at least one direct and one indirect method. The Assessment tools used to evaluate the extent of accomplishment of each learning outcomes are given in the assessment plan for the Bachelor's programme of faculty of Biosciences and Biotechnology, mentioned as under:

Programme Educational Outcome Assessment for B. Sc. (H) Life Science

Sl. No.	PLO's	Direct	Indirect
1	Student will be able to demonstrate and understanding of the various components of Life Science with Fundamental knowledge of Basic Science and Applied Science.	*Comprehensive Exam	Student Exit Survey
2	Student will be able to outline the problem based on principlesof Life Science.	Term Paper, Summer Internship, Viva-voce Comprehensive exam	Feedback industry internship guide
3	Student will be able to show skills for practical solution in Life Science	*Comprehensive Exam	Student Exit Survey
4	Student will be able to recite new knowledge and opportunities for leaning through the process of research and enquiry.	*Major project Rubrics *Comprehensive Exam	Student Exit Survey
5	Student will be able to demonstrate skills in explaining clearly, communicating in a team, presenting to a growth.	*Rubrics (Communication skills) *Comprehensive Exam	Student Exit Survey
6	Student will use skills for working independently as well as team to achieve goals.	*Rubrics *Comprehensive Exam	Student Exit Survey
7	Student will be able to use and apply appropriate tools, techniques, adresources for understanding ofthe Life Science.	Major project rubrics *Comprehensive Exam	Student Exit Survey
8	Student will be able to state ethical reasoning and ethical issues associated with current Life Science Research.	*Plagiarism Checking of Major project Rubrics (Behavioural Science)	Feedback industry internship guide

9	Students will be able to apply skills to plan, execute and conclude a research project in the area of Life Science	Rubrics (Behavioural Science) *Comprehensive Exam	Student Exit Survey
10	Student will identify the need to engage in independent and life long leaning in the context of scientific development in the area of Life Science.	*Major project Rubrics *Comprehensive Exam	Student Exit Survey
11	Student will be able to apply knowledge gained for the environmental conservation and restoration with sustainable development.	*Comprehensive Exam	Student Exit Survey
12	Student will be able to define social structure, issues and the solutions by the knowledge from humanity related subjects.	Term Paper, *Comprehensive Exam	

12. Examination System Progression & Passing Standards –

12.1 Attendance

a) Students are expected to have 100% attendance.
b) Every teaching faculty handling a class will take attendance till the last day of the class. The percentage of attendance upto this day will be calculated and forwarded to Examination Department by the HoI for issue of Admit Cards.
c) Relaxation of maximum 25% may be allowed to cater for sickness or other valid reasons beyond the control of the students for which written permission of HoI/ HoD is mandatory.
d) A student whose attendance is less than 75%, whatever may be the reason for shortfall, will not be permitted to appear in the End Semester Examination (ESE).
e) Under extreme special circumstances, Vice Chancellor may condone attendance up to 5% below 75% on the recommendation of HoI.

12.2 Course Assessment

a. The assessment components at the course level are defined in consideration with Course objectives
b. The assessment plan for the **theory courses** clearly defines the weightage of Continuous Internal Assessment and Final Assessment, which have various components to assess various learning outcomes. The weightage of CIA and Final Assessment is as under:

#	Continuous Internal Assessment	Attendance	Final Assessment	Course Type
1	45	5	50	Value addition courses

2	45	5	50	All other courses

c. Components of Continuous Internal Assessment (CIA)

Depending upon the nature of the course, the components of internal assessment may vary. The internal assessment will be completed within the semester. Some of the components of Internal Assessment are as follows:

S.No.	Component of Evaluation
1	Case Discussion/Analysis
2	Presentation
3	Home Assignment
4	Project
5	Seminar
6	Viva - Voce
7	Quiz
8	Class Test (s)
9	Term Paper
10	Rubrics
11	Any other, as recommended by the Board of Studies (BoS)

d. Assessment of Lab based Courses

The weightage of CIA and Final Assessment for lab/studio based courses will be as under as prescribed in the course syllabus:

S.No.	Continuous Internal Assessment	Final Assessment
1	50	50
2	40	60
3	30	70

e. Assessment of Non Teaching Credit Courses (NTCC)

The weightage of CIA and Final Assessment will be as under as per NTCC regulations and Guidelines:

S.No.	Continuous Internal Assessment	Final Assessment	Credit Units

#			
1	50	50	> 8 Credit Units
2	40	60	5-8 Credit Units
3	30	70	Upto 4 Credit Units

The breaks up (components and their weightage) of continuous internal assessment are given as under:

#	Title	(CIA = 40%)	(CIA = 50%)
1	Timely Registratio	1	1
2	Topics & Synopsis Approv	2	2
3	**WPRs** No. of WPR Submitted) Satisfactory WPR)	8 7	10 10
4	2 Periodic Progress Review by a board of faculty through presentation	8	8
5	1st Draft on tim	1	1
6	2nd Draft on tim	1	1
7	Final Report (Report with <10% Plagiarism)	1	1
8	Final Report timely submissi	1	1
9	Final Report Assessme	10	15

12.3 Minimum & Maximum Duration Of Academic Programmes

a. The maximum permissible period for completing a programme for the programmes of more than two academic years duration, the maximum permissible period shall be n+2 academic years (four semesters), where "n" represents the minimum duration of the programme. On request from the student and recommendation of HoI/Dean, Vice Chancellor may grant extension of one more year (1) i.e. n+1+(1) for 2 years course

12.4 Grading System

a. The level of students' academic performance as the aggregate of continuous evaluation and end term examination shall be reflected by letter grades on a ten point scale according to the connotation as per Table - A

TABLE - A

Grade	Qualitative Meaning	Grade Point Attached
A+	Outstanding	10
A	Excellent	9
A-	Very Good	8
B+	Good	7
B	Above Average	6
B-	Average	5
C+	Satisfactory	4
C	Border Line	3
F	Fail	0
I	Incomplete	0
(F) DE	Debarred	0
AB	Absent	0
U	Unsuccessful	-
S	Successful	-

12.5 Passing Criteria

A student has to fulfill the following conditions to pass in their programme of study:

a) A student who has earned minimum number of credits prescribed for their programme as per the Structure, Curriculum and Scheme of Examinations, shall be declared to have passed the programme of study.

b) Internal Assessment Evaluation

   i) A student is required to secure minimum 30% marks to pass in End Semester Examination and minimum aggregate marks 40% to be considered 'PASS' in each course unit. Passing in Internal Assessment is not mandatory

   ii) **There will be no provision for re-appearing in any component of Internal Assessment in subsequent semesters.**
   The students who are unable to score passing SGPA & CGPA for award of degree because of having obtained Zero mark in the Internal assessment in any course/courses shall be eligible to repeat the internal assessment of the relevant course/courses in the following cases:

   a) *Extended period (n+1) or (n+2) or beyond as the case may be*

   b) *Year Back*

c) Students should also pass in each term/semester separately by securing a minimum Semester Grade Point Average (SGPA) of 4.5 for UG on a 10 point scale.

d) A student who has reappeared/repeated the examination of course unit(s), the best of the two scores obtained shall be taken into consideration for calculating the SGPA and CGPA and eligibility for award of a degree.

The student must pass in Summer Training / Internship, Project, Dissertation (wherever prescribed), by securing at least C+ Grade.

12.6 Promotion To Next Semester/Year

Promotion will be considered at the end of each academic year.

a) A student will be eligible for promotion from 1st year to 2nd year and so on provided he has minimum SGPA and CGPA as under:

SGPA (First Year)	5
CGPA	4.5

b) Promotion from 1st year to 2nd year: – If a student does not fulfill the above criteria may be promoted to 2nd year on the recommendation of HoI and he/she will be placed on "Academic Probation" provided he/ she has cleared at least 60% of number of Courses /Credit units.

c) Student who is promoted to next year by meeting the promotion criteria but is not meeting qualifying criteria (passing criteria) for award of degree, will be placed on Academic Probation for one year to improve his/her SGPA/CGPA.

d) A student who is not eligible for promotion will have the option to either Repeat the Year / take an Academic Break/Repeat a Semester or Withdraw from the programme

12.7 Academic Probation (PAP)

o Students who fail to clear Promotion Criteria but are promoted to next Academic Year or not meeting qualifying criteria for award of Degree will be placed on Academic Probation for one year.

o The student who does not clear the Passing Criteria at the end of the Academic Probation will not be eligible for promotion to the subsequent years. She/he will have the option either to Repeat the Year or Withdraw from the Programme.

12.8 Promotion with Academic Warning (PAW)

Students who fail to get promoted under PAP may be promoted to next Academic year under following conditions:-

(i) if a student meets passing/promotion SGPA & CGPA criteria but has back papers in any of previous semesters

(ii) if the student has scored Passing Criteria of SGPA in all semesters except one, in which he/she has Promotion Criteria of SGPA of previous year(s) and also has Promotion Criteria of SGPA & CGPA in current year.

All students who are promoted to next year under PAP/PAW category will be required to sign an Undertaking stating that they are under Academic Probation/ Warning and will be required to score minimum passing/promotion SGPA & CGPA criteria as required at the end of Academic Probation/ Warning Period.

12.9 Academic Break

a) Students who apply for Academic Break and the case is recommended by the Heads of Institutions for justifiable reasons to be recorded, can be granted Academic Break of one year to the students of two years course.

b) However, the total period to qualify the course will not exceed the prescribed n+1 year for upto two years course and n+2 years for three years and above courses.

12.10 Re-Appearing

a) A student who has fulfilled the attendance requirements and is eligible to appear in an Examination, fails to appear in the examination shall be required to subsequently appear in the examination when scheduled for next batch of students on payment of prescribed fee.

b) A student who has not fulfilled the minimum attendance requirement in any Course Unit(s) shall not be allowed to appear in the end term Examination of that Course Unit but shall be allowed to subsequently appear in the examination when scheduled for the next batch of students, on payment of prescribed examination fee and fulfillment of such eligibility conditions as prescribed in the Regulations.

c) Guided Self Study Course

   i) All students having back paper are required to register themselves for GSSC within one week (7 days) from the date of commencement of the semester.

   ii) Any assignment/evaluation of GSSC will not be considered for award of marks for continuous Internal Assessment.

   iii) No Student will be permitted to appear for back paper(s) in the end term examinations without registering for GSSC and getting suitability report from allotted faculty.

d) A student who has failed to secure minimum C+ Grade (Grade Point 4) in a course unit shall be eligible to re-appear / repeat the examination of such course units with a view to secure minimum qualifying/passing score.

e) A student, who has failed to secure the required qualifying/passing SGPA i.e. 5.0 for PG Courses shall, in order to secure a passing SGPA, apart from fulfilling the requirements has the option to reappear in the end term examinations also of the Course Units of the concerned term in which he/she desires to improve his/her performance, when these examinations are held on normal schedule.

f) Students who have passed all courses (Minimum C+ Grade) but not meeting Promotion/Passing SGPA criteria i may be permitted to appear in Supplementary Examination with a view to improve grade and score Passing/Promotion SGPA of the respective semesters.

g) Students who are eligible to re-appear in an examination, or are repeating the course(s) shall have to apply to the Controller of Examinations to be allowed to reappear in an examination or to repeat the course(s), and pay the fees prescribed by the University.

h) The Departments/Constituent Units may, at their discretion, arrange for additional teaching in the form of GSSC for students repeating the examination of course(s) during the breaks. The modus operandi of such instructions shall be as notified by the Department/Constituent Unit. Extra fee shall be charged from such students for attending GSSC.

In all cases of re-appearing, the marks obtained by the students who have re-appeared will be converted to the appropriate letter grade not exceeding B+.

12.11. Supplementary Examinations

a) For the final year & pre-final students, supplementary examinations for those who have not secured passing grades, or were debarred/detained from appearing in any examination and they made up the deficiency in attendance as per provisions of these Regulations, will normally be held within thirty days after the declaration of results of the final Semester Examinations.

b) A student who fails to appear or qualify in Supplementary Examinations shall reappear in the examinations when scheduled for the next batch of students within the time span prescribed for the programme.

c) A student wishing to appear/reappear in the Supplementary Examination shall apply to the Head of Department/Constituent Unit online in the prescribed form within fifteen days of the date of declaration of result or date announced by Exam Department along with prescribed Examination Fee.

d) The eligibility of a student for appearing in the Supplementary Examination shall be verified by the Head of Department/Constituent Unit and a list of eligible students containing the details of Course Units in which the students are recommended for appearing in the supplementary examination shall be forwarded to the Controller of Examinations within one week along with prescribed fee payment receipts, after the last date for submission of examination forms.

e) Better of two scores obtained after Supplementary Examination in repeat course unit(s) shall be taken into consideration for calculating the SGPA and CGPA and eligibility for award of a degree/diploma.

13. Academic Discipline

13.1 Acts of Unfair Means:

The following are considered as the act of unfair means:

- Talking to another student or any person, inside or outside the examination hall, during the examination without the permission of a member of the supervisory staff.
- Leaving the examination hall without handing over the answer book and/ or continuation sheet, if any, or any other specifically designed response sheet to the Invigilator or Supervisor concerned or Centre Superintendent or the authorized officer of the University deputed to the examination centre, and taking away, tearing off or otherwise disposing off the same or any part thereof.
- Writing matter connected with or relating to a question or solving a question anything (such as piece of paper or cloth, scribbling pad), other than the answer book, the continuation sheet, any other response sheet specifically provided by the University to the student.
- Writing or sketching abusive or obscene expressions on the answer book or the continuation sheet or any other response sheet.
- Deliberately disclosing one's identity or making any distinctive marks in the answer book for that purpose.
- Making appeal to the Examiner/Evaluator soliciting favour through the answer book or through any other mode.
- Possession by a Student or having access to books, notes, paper or any other material, whether written, inscribed or engraved, or any other device, which could be of help or assistance to him in answering any part of the question paper.
- Possession of mobile phone, laptop or any electronic device which can be of help or assistance to the student in answering any part of the question paper.
- Concealing, destroying, disfiguring, swallowing, running away with, causing disappearance of or attempting to do any of these things in respect of any book, notes, paper or other material or device, used or attempted to be used by a student for assistance or help in answering a question or a part

thereof.

- Passing on or attempting to pass on, during the examination hours, a copy of a question paper, or a part thereof, or solution to a question paper or a part thereof, to any other student or to any person.
- Smuggling into the examination hall and/ or receiving/attempting to receive an answer book or a continuation sheet, or any other form of response sheet or a solution to a question paper or to a part thereof or taking out or arranging to send an answer book or continuation sheet, or replacing or attempting to get replaced the answer book or continuation sheet or any other response sheet during or after the examination with or without the help of or in connivance with any person connected with the examination, or through any other agency, whatsoever.
- Approaching or influencing directly or indirectly a paper setter, examiner, evaluator, moderator, tabulator or printer or any other person connected with the university examination with the object, directly or indirectly, of influencing him to leak out the question paper or any part thereof, or stealing/procuring the question paper from any source before the examination or to enhance marks, or favourably evaluate, or to change the award in favour of the student.
- Any attempt by a student or by any person on his behalf to influence, or interfere with, directly or indirectly, the discharge of the duties of a member of the supervisory or inspecting staff of an examination centre before, during or after the examination. Provided that without prejudice to the generality of the provision of the clause, this would include any such person who:

    (i) abuses, insults, intimidates, assaults any member of the supervisory or inspecting staff, or threatens to do so.

    (ii) abuses, insults, intimidates, assaults any other student or threatens to do so, shall be deemed to have interfered with or influenced the discharge of the duties of the Supervisory and the inspecting staff.

- Copying, attempting to copy, taking assistance or help from any book, notes, paper or any other material or device or from any other student, to do any of these things or facilitating or rendering any assistance to any other student to do any of these things.
- Arranging to impersonate for any person, whosoever he may be, or for himself or impersonating for the other student at the examination.
- Forging a document or using a forged document knowing it to be forged in any manner relating to the examination.
- Any other act of omission or commission declared by the Academic Council/Executive Council to be unfair means in respect of any or all the examinations.

13.2 Discipline Committee: A student discipline committee is constituted to ensure disciplinary control in the University

a. At the time of admission, every student signs a declaration that on admission, he submits himself to the disciplinary jurisdiction of the Vice Chancellor and several authorities of the University vested with the authority to exercise discipline.

b. Without prejudice to the generality of the power to maintain and enforce discipline, the following amounts to acts of indiscipline or misconduct on the part of a student of the University:

   i. Physical assault or threat to use physical force against any member of the teaching and non-teaching staff of any Department / Institution / School / College / Constituent Unit / Centre and against any student within Amity University Uttar Pradesh.
   ii. Unauthorisedly remaining absent from the class, test or examination or any other curricular or co-curricular activity which he/she is expected to participate in.
   iii. Carrying of, use of or threat to use of any weapons.

iv. Misbehavior or cruelty towards any other student, teacher or any other employee of the University, a college or institution.
v. Use of drugs or other intoxicants except those prescribed by a qualified doctor.
vi. Any violation of the provisions of the Civil Rights Protection Act, 1976.
vii. Indulging in or encouraging violence or any conduct which involves moral turpitude.
viii. Any form of gambling.
ix. Discrimination against any student or a member of staff on grounds of caste, creed, language, place of origin, social and cultural background or any of them.
x. Practicing casteism and untouchability in any form or inciting any other person to do so.
xi. Any act, whether verbal or otherwise, derogatory to women.
xii. Smoking, use of narcotics, possession and consumption of alcoholic beverages or gambling in any form.
xiii. Any attempt at bribing or corruption of any manner or description.
xiv. Willful destruction of the property of the University or its Departments / Institutions / Schools / Colleges / Constituent Units / Centre's etc.
xv. Behaving in rowdy, intemperate or disorderly manner in the premises of the University or the college or the institution, as the case may be, or encouraging or inciting any other person to do so;
xvi. Creating discord, ill-will or intolerance among the students on sectarian or communal grounds or inciting any other student to do so
xvii. Causing disruption of any manner of the academic functioning of the University system
xviii. Indulging in or encouraging any form of disruptive activity connected with tests, examinations or any other activity of the University or the college or the institution, as the case may be
xix. Unpunctuality
xx. Ragging
xxi. Violation of the status, dignity and honour of students, in particular female students and those belonging to a scheduled caste or a scheduled tribe or other backward class
xxii. Any practice whether verbal or otherwise, derogatory to women
xxiii. Verbal abuse, mental or physical torture, aggression, corporal punishment, harassment, trauma, indecent gesture and obscene behaviour of students
xxiv. Indulging in or encouraging any form of disruptive activity connected with tests, examinations or any other activity of the University or the college or the institution, as the case may be.

13.3 Anti-Ragging Cell: A cell is constituted to ensure that students do not induldge in any kind of ragging activities. Following comes under ragging and accounts to disciplinary action

(a) Any conduct by any student or students whether by words spoken or written or by an act which has the effect of teasing, treating or handling with rudeness a fresher or any other student.
(b) Indulging in rowdy or indisciplined activities by any student or students which causes or is likely to cause annoyance, hardship, physical or psychological harm or to raise fear or apprehension thereof in any fresher or any other student;
(c) Asking any student to do any act which such student will not in the ordinary course do and which has the effect of causing or generating a sense of shame, or torment or embarrassment so as to adversely affect the physique or psyche of such fresher or any other student.
(d) Any act by a senior student that prevents, disrupts or disturbs the regular academic activity of any other student or a fresher;
(e) Exploiting the services of a fresher or any other student for completing the academic tasks assigned to an individual or a group of students;
(f) Any act of financial extortion or forceful expenditure burden put on a fresher or any other student by students;
(g) Any act of physical abuse including all variants of it: sexual abuse, homosexual assaults, stripping, forcing obscene and lewd acts, gestures, causing bodily harm or any other danger to health or person;
(h) Any act or abuse by spoken words, emails, post, public insults which would also include deriving perverted pleasure, vicarious or sadistic thrill from actively or passively participating in the discomfiture to fresher or any other student;

(i)   Any act that affects the mental health and self-confidence of a fresher or any other student with or without an intent to derive a sadistic pleasure or showing off power, authority or superiority by a student over any fresher or any other student.

Prohibition of Ragging

a)   Ragging within the University Campus including its Institutions / Departments /Hostels or/ and any part of Amity University system as well as on public transport system outside the campus is strictly prohibited.

b)   Ragging in any form is prohibited also in the private lodges/buildings where these University students are staying.

14. Student Support System & Services – In order to provide support to students, following systems are in place

14.1 – Amizone - The University has an intranet known as "**Amizone**" where information and learning resources are uploaded regularly. The following are the online facilities under Amizone:
- On-line journals
- Conference / Workshop / Seminars
- Session Plan and Course materials
- Class Time-table / Schedule
- Student's Handbook
- University Regulations & Guidelines
- Syllabus and Programme Structures for various batches / semesters / programmes
- Display of various information/circulars/notices such as:

  - Academic Calendar

  - Examination schedule
  - Calendar of events and event details with photos
  - Guidelines for Placements, Events, Guest Lectures, Projects, Term Papers, Farewell Party, Orientation Programmes etc.,
  - Holidays list
  - Invites are being sent for various conferences, meets, summits and admission boards
  - Online poll/Quiz

14.2 Programme Leaders/Coordinators – A programme leader is appointed for every programme who is responsible for:
- Timely uploading of information on Amizone
- Dissemination of information related to academics to all the students enrolled in the respective programme
- Addressing students' queries and doubts
- Smooth conduct of routine activities

14.3 Guided Self Study Course (GSSC) - Guided Self Study courses are conducted to prepare the students for back papers

- The institutions prescribe "Guided Self Study Course" for the course units in which the students failed or are detained due to shortage of attendance in a semester and arrange counseling sessions for the students on weekends and holidays in the same odd or even semesters.
- The students who are detained due to shortage of attendance in any subject of a semester shall register with their Department/Constituent Unit for guided self-study course in the beginning of next semester/trimester/year scheduled for next batch of students. They will be required to pay a fee per subject as prescribed by the Department/Constituent units.
- The Departments/Constituent Units may prescribe term papers / home assignments which the

students will submit to their teacher's subject-wise within the due dates.

- The regularity in attending the classes and prompt submission of assignments by due date will determine whether a debarred or detained candidate is permitted to take the re-examination or not. The schedule for regular collection and submission of term paper/ home assignments will be announced by the Department/ Constituent Unit.
- Only those students who register for Guided Self Study Course (GSSC) and complete the requirements as prescribed by the Department/Constituent Units will be permitted to take the examination in the respective subject when the examinations of such Course Units are conducted in normal schedule along with the next batch of students. The scheme of re-examination will be announced by the University on receipt of report from the Department/Constituent Unit. The student will be permitted to appear in examination on satisfactory performance in GSSC.

14.4 Class Representative (CR) System - A Class Representative is a responsible, prestigious and challenging position. Students are encouraged to take up this leadership position. To become a representative of the class, a student must have the values of trustworthiness, honesty, transparency and commitment.

The roles and responsibilities of the Class Representative –

Class Data Collection & Analysis: for each student for various activities and issues.

- Advocacy: influencing the student community for positive outcomes with respect to academics, discipline, and participation in co-curricular and extra-curricular activities.
- Monitoring: attendance, timetable, syllabus progress, discipline and related issues.
- Quality enhancement: by representing the legitimate concerns and problems of classmates and giving feedback to both the classmates and authorities.
- Coordination: with various authorities in the Institute and University.

14.5 Mentor-Mentee System - Mentoring is to support and encourage students to manage their own learning in order that they may maximise their potential, develop their skills, improve their performance, andbecome the person they want to be.

Mentoring is a partnership between two people, Mentor & Mentee, based on mutual trust and respect.

At Amity, mentoring encourages students to take guidance and develop partnerships with four types of mentors:

- Faculty Mentor
- Alumni Mentor
- Industry Mentor
- Parent Mentor

All four Mentors jointly collaborate towards the development of the student through a process of experiential guidance and learning.

Every Amity institution arranges appointment of faculty, industry and alumni mentor for each student. Formal meetings are scheduled between mentors and mentees so that learning is progressed across functions, groupings, and cultures for maximum benefit. Students aims are decided mutually between mentor and mentee and the progress towards the desired goals would be tracked throughout the duration of his/her stay with Amity. We are proud to say that our mentoring system is unique to Amity and has helped many of our students stand out amongst their peers. They have excelled on both their personal and professional fronts as a result of the mentoring system.

14.6 Educational Loan, Financial Support and Scholarships - Amity University offers a variety of

scholarships to the meritorious students. The scholarship is in the form of financial aid. Following are the types of scholarships offered to the Amity students:

a) On Admission Merit Scholarship – There are three types of these scholarships as mentioned below:

- 100% Dr. Ashok K. Chauhan Scholarships

- 50% On Admission Merit Scholarships

- 25% On Admission Merit Scholarships (Applicable to Lucknow Campus)

These scholarships are granted at the time of admission on the basis of school and /or graduation results. Scholarship is granted on annual basis and continuation in second and further years of the program is subject to the academic performance (Merit List based on CGPA) & other conditions as laid down in the regulations.

b) On Admission Sports Scholarship – To attract talent in sports scholarship are given –

a) 100% Scholarship – International Players*

b) 50% Scholarship – National Medal Winners*

c) 25% Scholarship – National Participation*

c) Merit-Scholarship During the Programme – These scholarships are granted from second year onwards for encouraging students to achieve higher performance during their studies in their respective academic programme. The amount of scholarship is 30% of the academic year tuition fee. The number of scholarships depends upon the no. of students in the programme. (max.limit is three).

d) Merit-Cum-Means (MCM) Scholarship - These scholarships is granted to the students who are academically good and need financial assistance to continue their education in the University. The amount of scholarship is upto 50% of academic year tuition fee. Students need to apply for such scholarships to their respective Head of Institution as per the prescribed format (uploaded on Amizone) & support documents at the commencement of the Academic Session. Continuation of the scholarship is based on students' merit, academic & extra/co-curricular activities performances & family financial position.

e) Special Scholarships - These scholarships are granted to the students showing extraordinary

achievements in extra- curricular activities. The amount of scholarship depends on individual cases. Students are required to apply for the same as per the prescribed format (uploaded on Amizone) at the commencement of the Academic Session.

f) Other Scholarships – These scholarships are instituted by Grants from individuals, Trusts, Organizations, Institutions etc with a view to provide financial assistance to needy students

14.7 Medical Services - Hostellers are advised to get themselves inoculated against communicable diseases at their own initiative and expense.

First-aid Medical Treatment is available within the campus. Amity Clinic has a resident doctor and nursing staff. Students contributing to group medi-claim policy are provided medical treatment of up to Rs 25,000/- in the following hospitals - Kailash Hospital (Noida), Indraparstha Apollo Hospital (New Delhi), Noida Medicare Centre, Vinayak Hospital (Noida).

On falling sick, the hostellers are to inform the Warden who will arrange medical help. If a hosteller is advised hospital admission, necessary communication is sent to parents/local guardians, Programme Director and Director Finance. Amity University also offers a medical insurance plan to all students.

14.8 Industry Interaction – Amity University have very strong relationship in various sectors of Industries. Expert for the Industries are part of our BoS, AAB and other Statutory body at AUUP. AUUP regularly organized various Academia –Industry interaction session for the benefit of society.

Industry experts deliver guest lectures to the students. AUUP also provide consultancy services to the Industry. Our students get internships and project in various industries.

14.9 Career Counseling & Placement

Amity endeavors to nurture competitive and accomplished business leaders, entrepreneurs and professionals. The Corporate Resource Center (CRC) at Institutional level, is established to groom the students to take up the corporate responsibilities, soon after they pass out from the campus

The CRC provides holistic comprehensive career-planning services to students by providing expertise, resources, and support. The CRC empowers students to build bridges to successful future careers.

It aims to help students make a successful transition from their educational environment to employment or further educational pursuits. The programs and services are designed to increase the students' confidence and provide the necessary skills and information to succeed in pursuing a career.

14.10 Guidance and Counseling Cell - Students face difficulties like separation from their families, growing up and learning to function as independent adults, developing new and closer relationships, as well as defining and establishing themselves on a possible career. The counseling center is committed to provide a broad range of high quality, innovative and ethical services that address the psychological, educational, social and development needs of the students.

Students are advised to make full use of the ACGC whenever they wish to share thoughts regarding their emotional, personal & professional needs. All interactions with students are kept strictly confidential.

14.11 Suggestions and Grievance Redressal System - In order to make student's stay in AUUP comfortable and stress free, Amity has a multi layered student grievance redressal system. Student having a problem will approach the Academic and General Counseling Cell at his/ her department level. Student's problems that cannot be resolved at the department level will be referred to the appropriate Committee. Issue will definitely get resolved within a short period of time.

a) The suggestion / grievances by students/parents can also be sent on-line through Amizone.

b) In addition, problems related to the wellbeing of students warranting urgent attention can be submitted directly to the Dean Student Welfare (msahni@amity.edu) and/or Students Satisfaction and Happiness Mission (SSHM) at sshm@amity.edu

c) Pursuant to regulation of UGC on promtion of Equity in HIE's as notified in the Gazette of India, dated January 19, 2013, all the issues related to "Equity" as defined in the said UGC Regulations shall be dealt by Equal Opportunity Cell, constituted for the purpose.

15 Extra-curricular and Co-curricular activities

Various Extra curricular and Co-curricular activities are organized beyond classroom for the holistic development of students. Some of the activities are:

i. Club –Committee Activities
   - Sports Club
   - Cultural Committee
   - Specialty Club, eg. Marketing Club, HR Club, IT Club, Robotics Club, etc.
   - Placement Committee
   - Alumni Committee
ii. Conferences, workshops seminars, etc
iii. Inter-University competitions, Sports Competitions, corporate competitions
iv. Conducting Outdoor Activities Based Courses (OABC) which includes
   - Military training camps (MTC) for both boys and girls
   - Imparting training to students through amity cadet corps (ACC)
   - Human Values and Community Outreach (HVCO)Course
   - Entrepreneurship Awareness Camps (EAC)
   - Performing Arts (PA) Courses
   - Basic skills course in sports
   - Yoga classes for mental and physical wellbeing

v. Human Values Quarter/year where students organize various activities such as blood donation camp, visit to old age homes, spastic children home & orphanages etc, street plays, awareness campaigns, debates etc.

16 Policy, Regulations & Guidelines

The students are governed by the regulations and guidelines of AUUP and such other regulations and guidelines as may be notified by AUUP from to time. It is important that the students read these regulations and guidelines, already available in the 'Amizone' which can be accessed by the students using their password.

16.1 Regulations

1. Conduct of Examinations Scheme of Evaluation and Discipline among Students in Examinations.

2. Research Degree Programmes: M.Phil, Ph.D and Post-Doctoral Programmes D.Litt, D.Sc. and LLD.

3. Lateral Entry Admissions and Transfer of Credits.

4. Maintenance of Discipline among Students.

5. Hostel Accommodation.

6. Scholarship, Awards, Medals and Special Awards.

7. Conduct of Convocation.

8. Admissions & Enrolment of Students and Examination & Evaluation for Distance Learning Programmes.

9. Admissions & Enrolment of Students and Examination & Evaluation for Online Programmes.

10. Prevention of Sexual Harassment.

11. Regulation/ Directive for Banning Ragging & Anti-Ragging Measures.

12. Regulations on Choice Based Credit System

16.2 Guidelines

1. Attendance for Official Duty.

2. Conduct of Concluding Ceremony.

3. Student's educational Tour/Industry visits/Seminars/Conference.

4. Guidelines for Fresher's Party.

5. Guidelines for Farewell Function.

6. Library Guidelines.

7. Students Grievance Redressal.

8. Guidelines for PG students for early joining for final placement.

9. Mentoring Programme.

10. Project Training.

17. Provisional Certificate, Concluding Ceremony

There has been a tradition at the Amity Institutions to conduct a Concluding Ceremony when the students of a programme have undergone and completed all the academic activities of a programme. The students of the outgoing batch are awarded Provisional Certificate for completion of the programme and selected students are presented awards (in the form of Citations, Salvers, Books etc.) in recognition of their contribution and achievements in various fields.

18. Convocation

Amity Convocation for successfully qualified Graduands of several Programs, is held every year in the month of December for award of Degrees/ Diplomas, Medals (Gold, Silver and Bronze), Trophies, Citations and Corporate Awards. Few selected eminent personalities having outstanding contribution in their respective fields, are also conferred upon honorary degrees to acknowledge their work. Alumni are specially invited for the Convocation, and during the ceremony, they handover the flag to the passing out graduands to welcome them for being part of the great Amity Alumni Family.

#	Appendices
A	Definition – Course Types and Description
B	Detailed Programme Structure
B1	B. Sc.(H) Life Science 2017-20
B2	B. Sc.(H) Life Science 2018-21
B3	B. Sc.(H) Life Science 2019-22

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Appendix

Definition and Descriptions

Thus, in framing a suitable curriculum for the *programme in* Management *domain,* the following definitions/descriptions must be followed. This is expected to help in maintaining uniformity of preparing the final programme structure, *Syllabi* and scheme of instructions for *Programmes* offered by various institutions.

4.1 Semester System: Each *Master's programme in* Management *domain* to be ordinarily of 2 academic years (=4 Semesters) with the year being divided into two Semesters, each for course work, followed by Continuous Assessment *(CA/IA)* in the Semester & End Semester Examination *(ESE).*

4.2 Annual Academic Calendar - Amity University follows semester system for conduct of classes. Annual Academic calendar have odd Semesters (I, III) and even semesters (II, IV). Date of Commencement of each semester and last teaching day of semester is finalized well in advance in the detailed 'Annual Academic Calendar' for a programme in accordance with 'Block Academic Calendar' of the University.

4.3 Credit System: A system enabling quantification of course work, with *one credit being assigned to each unit* after a student completes its teaching-learning process, and assessment (both *CA/IA & ESE).* Further, *Choice Based Credit System (CBCS)* to be helpful in customizing the course work for a student, through *Core & Electives (both professional and open electives).*

4.4 Credit Courses: All Courses registered by a student in a *Semester* to earn *credits*; In a widely accepted definition, students to earn *One Credit* by registering and passing:
- One hour/week/Semester for *Theory/Lecture (L) Courses;* or *Tutorials (T)* and,
- Two hours/week/Semester for *Laboratory/Practical(P) Courses;*

NOTE: Other student activities not demanding intellectual work or enabling proper assessment like, study tour, club Committee activities and guest lectures not to carry *Credits;*

4.5 Credit Representation: *Credit* values for different academic activities to be represented by following the well accepted practice, as per the example in Table 1:

Table 1: Credit Representation

Lectures (hrs/wk/Sem.)	Tutorials (hrs/wk/Sem.)	Practical Work (hrs/wk/Sem.)	*Credits* (L: T: P)	Total *Credits*
3	0	0	3:0:0	3
2	2	0	2:2:0	4
2	0	2	2:0:1	3
2	2	2	2:2:1	5
0	0	6	0:0:3	3

One Credit Unit will be equivalent to 10-12 hrs of Classroom Teaching (L-T) and 20-24 hrs of Lab practical's and 50-60 hrs of field work/industry work.

4.6 Course Load: Every student to register for a set of *Courses* in each *Semester,* with the total number of their *Credits* being limited by considering the permissible *weekly Credit hours load: 30/Week.* This is meant to enable the students to engage in home work assignments, self-learning outside the Class rooms/Laboratories, Extra/Co-Curricular activities and *add-on Courses,* if any, for their overall development. UGC guidelines prescribe:

   a. **The total periods provided for contact teaching shall not be less than 30 hours a week.**
   b. **The time provided for practical, fieldwork, Library, utilization of computer and such other facilities shall not be less than 10 hours a week**

4.7 Course Registration: Every student to formally re-register for programme and prescribed *Courses (Credits)* under **HoD/PL/PC** advice in each *Semester* for the Institution to maintain proper record; Helpful for monitoring the *CA/IA, ESE* performance in each case and to assist the students in self-paced learning by dropping/withdrawing from *Course(s)* and add new programmes to avail *Course Flexibility for CBCS with prior approval of Course Advisory Committee (CAC)/HoI.*

4.8 Course Evaluation: CA/IA and *ESE* to constitute the major evaluations prescribed for each *Course,* with only those students maintaining a minimum standard in *CA/IA* (to be fixed by the institution) being permitted to appear in *SEE* of the *Course; CA/IA* and E*SE* to carry 30% and 70% respectively, to enable each *Course* to be evaluated for 100 marks, irrespective of its *Credits;*

4.9 CA/IA: To be normally conducted by the *Course faculty* and include mid-term/weekly/ fortnightly class tests, home work, problem solving, group discussion, quiz, mini-project & seminar throughout the *Semester*, with weightage for the different components being fixed at the institutional level; *Faculty* also to discuss on *CA/IA* performance with students;

4.10   ESE: To be normally conducted at the institutional level as per the University Examination regulations and guidelines. For this purpose, *Syllabi* to be modularized and *ESE* questions to be set from each module, with choice if any, to be confined to module concerned only. The questions to be comprehensive emphasizing analysis, synthesis, design, problems & numerical quantities;

4.11   Grading: To be normally done using *Letter Grades* as qualitative measure of achievement in each *Course,* as described in student handbook and examination regulations, based on the marks(%) scored in *(CA/IA+ESE)* of the *Course* and conversion to *Grade* done by *Relative Grading.*

4.12   Grade Point(GP): Students to earn *GP* for a *Course* based on its *Letter Grade;* e.g., on a typical 10-point scale, *GP* to be: *A+=10, A=09, A⁻=08,B+=07,B=06,B-=5, C+=04 & F=00;* Useful to assess students" achievement quantitatively & to compute *Credit Points (CrP)= GP X Credits* for the *Course;* Student passing a *Course* only when getting *C+ Grade.* Minimum passing marks in a course shall be 40%

4.13   Grade Point Average(GPA): Computation of *Semester GPA (SGPA)* to be done by dividing the sum of *CrP* of all *Courses* by the total number of *Cr* registered in a Semester, leading finally to *CGPA* for evaluating student's performance at the end of two or more *Semesters* cumulatively; This reform serving as a better performance index than total marks or %;

4.14   Passing Standards: Both *SGPA & CGPA* serving as useful performance measures in the *Semester System;* Student to be declared successful at the *Semester-end or Programme-end* only when getting *SGPA >=5 and CGPA >=6.00 for Master's Degree.*

4.15   Credits Required for Degree Award: Number of *Credits* to be earned by a student for the *Award* of degree fixed by Institutions and approved by Academic council to be normally in the range of:

- *Master's Degree programme in* Management - 100- 117 Credit Units (CU) i.e. equivalent to 30+hrs /Sem.

4.16   **Organization of Course Curriculum:** The Content of each Course has been organized into:

- **Course Description:** general introduction to the course
- **Course Objectives:** to elucidate the basic aims of the course
- **Pre-Requisite:** courses, Equivalent skills or prior experience that a student possesses that prior to registration in a specific course
- **Student Learning Outcomes (SLOs):** focus on the intended abilities, knowledge, values, and attitudes of the student after completion of the program
- **Course Syllabus –** having 5-6 modules having topics/descriptors under each module depending depth, width to be covered in order to achieve the course objectives and Student learning Outcomes.
- **Teaching Learning Pedagogy:** an array of different teaching learning strategies best suitable for the delivery of particular course used in different combinations to improve learning outcomes.
- **Assessment Plan -** The plan providing details of all methods of assessing student learning within the classroom environment, using course goals, objectives and content to gauge the extent of the learning that is taking place.
- **Text Books & Reference Books –** list of books that matches the course contents
- **Additional reading material –** list of journals, research papers or any other study material other than books which can be referred by student

4.17   **Model Curriculum Framework / Programme Structure:** The Model Framework includes following:

- Programme description: brief introduction of the programme
- Programme Educational Objectives/goal: statements that describe the expected accomplishments and professional status of the students after completion of the program
- Programme Learning Outcomes: describes the measurable knowledge, skills, abilities, or behaviors that students to be able to demonstrate by the time they complete their degree
- Curriculum Programme Structure /Framework - defines the course type and credit structure semester wise and overall credits prescribed as per University norms
- Outcome Assessment Plan: The plan providing details of all methods of assessing student learning outcome in the programme to gauge the extent of the learning that is taking place. (As per attached format)
- Employability of Graduands: embedding set of attributes in the curriculum and imparting knowledge to develop desired skills & competencies and equip students to compete in the global marketplace
- Resource Planning

4.18   **Outcome Based Education System** - The Learning outcomes are clearly defined at the programme level and course level. The **Programme Learning Outcomes (PLOs)** describes the student learning, i.e. what students will know and be able to do as a result of completing the programme. The **Student Learning Outcomes** (SLOs) describes the learning of student after completing a course.

4.19 Course Types

#	Course Types	Description
1	Core Courses	Courses that are relevant to the chosen specialization/branch of particular programme and must successfully be completed to receive the Degree and which cannot be substituted by any other course.
2	Allied Courses	These courses are from the allied / multidisciplinary area which supports the main discipline. Students have to take all the courses offered as allied by the institution and there is no choice available with them
3	Specialisation Elective Courses	These courses are discipline centric and students make a choice of courses from the list of specialization electives offered by the institution. They are relevant to the chosen specialization/branch of a particular programme
4	Mandatory Courses	Course work on peripheral subjects in a programme, wherein familiarity considered mandatory. These courses are included as non-Credit Courses with only a pass in each required to qualify for award of Degree from the concerned institution.
5	Open Elective Courses	Courses offered by other domains and chosen as per interest of the students. This course can be chosen from a **Basket of courses** and provides an extended scope and exposure to some other discipline/ domain or nurtures the candidate's proficiency/ skill.
6	Domain Electives	These courses are offered by the institutions under the same domain of study. Numbers of courses are offered by the institutions under the same domain and the students make their choice as per their interest and academic abilities
7	Value Addition Courses	VAC is considered as add on courses to add professional and ethical values in students. The courses like Behavioral Science, Business Communication (BC), Business Communication/ Communication Skills and Foreign Business Language (FBL) under VAC. Multiple Language Options such as Sanskrit, Russian, Chinese, Arabic, Japanese, French, and German & Spanish are being offered and it's mandatory that a student takes one language in each semester. A student can not choose more than one language during the programme of study.
8	Non Teaching Credit Courses	Non Teaching Credit Courses are self exploratory courses for professional development of students as well as to allow them to pursue their interest. It includes Summer Training, Dissertation, Term paper, Seminar and/or Minor project; these courses are conducted as per University Guidelines.
9	Outdoor Activity Based Courses (OABC)	OABC are offered centrally to all the students of UG and PG level. These are general education courses which includes courses like Military Training Camp (MTC), various Sports and Human Values & Community Outreach

10	Study Abroad Programme (SAP) Courses	SAP courses are offered in lieu of Open Electives, Domain Electives, Specialisation Electives, Outdoor Activity Based Courses and Value Addition Courses. The compulsory /core courses of a programme and their credits are not permitted to be replaced by other courses studied and assessed during SAP.
11	Skill Enhancement Courses	Skill enhancement courses are designed to develop the profession skills of students in the chosen area of study so that the students become industry ready.