

ISLAMIAH COLLEGE (AUTONOMOUS)

BRIEF HISTORY

Islamiah College is a symbol of devotion to education and love for learning of the Muslims of Vaniyambadi, who, in their zeal for translating into action the message of Sir Syed Ahmed Khan, established the Vaniyambadi Muslim Educational Society in 1901. The Society was registered in 1905, and soon, under its auspices, the Islamiah Elementary School was started. The phenomenal growth of the school was due to the untiring and dedicated services and leadership of Janab T. Hajee Badruddin Sahib, Janab Malang Hayath Basha Sahib, Janab T. Ameenuddin Sahib and Janab Malang Ahmed Basha Sahib. The full-fledged Islamiah High School came into being in 1912.

In 1915, the society resolved to establish the Islamiah College and the foundation stone of the College was laid by His Excellency Lord Pentland, the then Governor of Madras Province. With princely donations from Muslim Philanthropists, the College was started in 1919 and got recognition in July 1921. The building in which the College is housed at present was opened by Nawab C. Abdul Hakeem Sahib.

In 1946, the College was upgraded, offering instruction in the two-year degree courses in B.A. Economics and B.Com. In 1954, B.A. Mathematics was started. In 1956, the College got affiliation for the Pre-University and three-year degree courses, B.A., B.Sc., and B.Com. Courses were started in 1957.

THE COLLEGE GOT AFFILIATION FROM THE UNIVERSITY FOR VARIOUS ADDITIONAL COURSES:

S. No.	Name of the Course	Major Subject	Year of Affiliation
1	B.Sc.	Chemistry	1963
2	B.A.	History	1967
3	B.Sc.	Zoology	1967
4	M.A.	History	1974
5	M.Com.	Commerce	1975
6	M.Sc.	Mathematics	1976
7	B.Sc.	Physics	1981
8	B.A.	Corporate Secretaryship	1982
9	B.A.	Industrial Organisation	1983
10	B.Sc.	Biochemistry	1985
11	M.Phil.	Commerce	1986
12	M.Sc.	Chemistry	1986
13	B.Sc.	Computer Science	1988

To cater to the needs of the community in changing circumstances B.A. (Industrial Organisation) was converted to B.B.A. in 2005 and B.Sc. (Zoology) was converted to B.Sc. (Biotechnology) in 2006.

THE COLLEGE GOT AFFILIATION FOR THE FOLLOWING UNAIDED COURSES:

S.NO.	COURSE	MAJOR SUBJECT	YEAR OF AFFILIATION
1	Ph.D.	Commerce	1986
2	M.Phil.	Mathematics	1988
3	M.Phil.	History	1993
4	Ph.D.	History	1996
5	M.Sc.	Biochemistry	1998
6	M.Sc.	Physics	1999
7	M.Phil.	Chemistry	2000
8	B.C.A.	Computer Application	2000
9	Ph.D.	Chemistry	2005
10	Ph.D.	Mathematics	2005
11	M.Phil.	Biochemistry	2009
12	M.Phil.	Physics	2009
13	B.A.	English Lit.	2010
14	M.A	English Lit.	2010
15	M.Sc.	Biotechnology	2010
16	Ph.D.	Physics	2010
17	Ph.D.	Tamil	2012
18	B.Sc.	Computer Science	2013
19	M.Phil.	Biotechnology	2013
20	Ph.D.	Biotechnology	2014
21	Ph.D.	Biochemistry	2016
22	Ph.D.	Hindi	2016
23	B.Com.	Commerce	2016
24	Ph.D.	English	2018
25	Ph.D.	Urdu	2019
26	B.Sc.	Chemistry	2019
27	B.Sc.	Data Science	2022

In view of the changing scenario, two courses, namely B.A. (Economics) and B.A. (Corporate Secretaryship), were converted to B.Com (Finance & Accounts) and B.Com (Computer Applications), respectively, with effect from the academic year (2010-2011) to make the students of these two courses more employable.

The College, which had a humble beginning in 1919, has now grown into a full-fledged P.G. and Research Institution catering to the needs of the rural lot who would have otherwise not dreamt of taking a Research Degree.

Consequent to the establishment of Thiruvalluvar University, this College has been affiliated to Thiruvalluvar University from the academic year 2002-2003. In pursuance of academic excellence and to implement the suggestion of the NAAC peer team, the College applied for Autonomy in the year 2008. The expert team inspected the College in March 2010 and recommended Autonomy. The College has thus conferred Autonomy with effect from the academic year 2010-2011, and we have successfully completed the first phase of autonomy during the academic year 2015-2016. The UGC has granted extension of Autonomy to the College for a period of six years from 2016-17 to 2021-22. The College has been reaccredited by the National Assessment and Accreditation Council (NAAC), Bengaluru, with “A” Grade from February 2014. The College has been accredited by NAAC with “A” Grade again during the 3rd Cycle for 5 years from 02.02.2021 to 01.02.2026. By the grace of Almighty, The University Grants Commission, New Delhi, has granted a further extension of Autonomy to the College for a period of 10 years from 2022-23 to 2031-32.

The aim of the College is to foster in the teachers and students and, through them in society, the attitudes and values needed for developing a “good life” in individuals and society. The College has earned for Vaniyambadi a place in the educational map of India. The College keeps its portals open to members of all castes and communities.

REGULATIONS
BACHELOR DEGREE PROGRAMMES
(For Students admitted from 2023-2024)

CBCS

Choice-Based Credit System (CBCS) is flexible for learning. Credit defines the quantum of contents/syllabi prescribed for a course and determines the number of hours of instruction required. The distinguishing features of CBCS are the following:

It permits the students to:

- Choose Electives from a wide range of Elective Courses offered by various departments of the College.
- Undergo additional courses and acquire more than the required number of credits.
- Adopt an interdisciplinary approach to learning.
- Make the best use of the expertise of available faculty.

1. Eligibility for Admission

Students for admission to the first year UG degree programme in Arts / Science / Commerce / Business Administration shall be required to have passed the Higher Secondary Examinations (Academic or Vocational Stream) conducted by the Government of Tamil Nadu or an Examination accepted as equivalent thereto by the Governing Body of Islamiah College (Autonomous), Vaniyambadi.

Provided that Students for admission into the specific main subject of study shall also possess such other qualifying conditions as may be prescribed by the University / College in the regulations governing to respective programmes of study.

Admission to the direct second year of the UG degree programme under the LATERAL ENTRY system is permitted, provided there is a vacancy and it is subjected to the Eligibility and specific permission of Thiruvalluvar University. Lateral Entry admission is for those candidates who have completed their three-year diploma in the subject in which he seeks admission.

2. Cancellation of Admission

The admission is at the student's risk and is provisional, subject to the approval of Thiruvalluvar University. If the admission is not approved for any reason, the candidate shall not hold the College responsible for it. If selected, in the event of leaving the College after admission but at any time before

completing the programme, the fee for the residual period of the course should be paid by the student as per the rules in force.

3. Eligibility for the Award of Degree Programme

A student shall be eligible for the award of the Degree programme only if he has undergone the prescribed course of study in this College for three academic years and passed the examinations of all the Six Semesters prescribed, earning 140 credits and fulfilling such conditions as have been prescribed, therefore.

4. Duration

- a. Each academic year shall be divided into two semesters. The first academic year shall comprise the first and second semesters, the second academic year: the third semesters and fourth semester and the third academic year: the fifth and sixth semesters, respectively.
- b. The Odd semesters shall consist of the period from June to November of each year and the even semesters from December to April of each year. There shall be at least 90 working days comprising 450 instructional hours for each semester.

5. Course of Study

The main subject of study for Bachelor's Degree programme shall consist of the following:

- PART I** Generic Elective Languages
- PART II** English
- PART III** Core Courses, Elective & Discipline Specific Elective
- PART IV** Skill Enhancement Courses, Ability Enhancement Courses
 Environmental Studies, Value Education, Internship/Industrial
 Training and Professional Competency Course
- PART V** Extension Activity

6. Extension activities

All the students shall have to enrol for NCC / NSS / Sports and Games / Rotaract/Youth Red Cross or any other service organization and subject associations in the college and shall have to put in a compulsory minimum attendance of 40 hours which shall be duly certified by the Principal of the college before 31st March in a year. If a student lacks 40 hours of attendance in the first year, he has to compensate for the same during the subsequent years. Literacy and Population Education field work shall be compulsory components in the above extension service activities.

The total marks for Extension Activities are 100, it is divided into 75 for External Activities (outside the college campus) and 25 for Internal Activities (inside the college campus) and the passing minimum is 40%.

7. Continuous Internal Assessment (CIA) Test

The following procedure will be followed for the award of internal marks:

CIA Test I: Two or Three hours duration for 75 marks

CIA Test II: Three hours duration for 75 marks

Marks Distribution	Theory & Practical
CIA Test Marks 150 to be converted to	10 Marks
Library Usage in Hours	5 Marks
Assignment / Seminar / Observation	5 Marks
Attendance	5 Marks
TOTAL	25 Marks

Reg. No	Name	Test I - 75	Test II - 75	Total - 150	Marks Converted to 10 to 10	Library Usage Min. 20 hours - 5	Assignment / Seminar 5	Attendance - 5	Total for 25 (Rounded Off)

In the last column, any fraction may be rounded off to the nearest integer. The marks for the Attendance component in the Continuous Internal Assessment should be calculated as follows:

Attendance Earned	Category	Marks to be Awarded
90 % and Above	Highly Regular	5
75% but below 90%	Regular	4
65% but below 75%	Shortage	3
55% but below 65%	Detained	2
Below 55 %	Redo	0

8. Library Usage

The following procedure will be followed for the award of internal marks component of Library Usage:

Library Usage for all UG Programmes - 20 hours per Semester

Library usage for UG in hours	Marks to be awarded
1 hours to 7 hours	3
7 hours to 14 hours	4
14 hours and above	5

9. Requirements for proceeding to subsequent Semester

- Students shall register their names for the First-semester Examination after admission to the UG programmes.
- Students shall be permitted to proceed from the first Semester up to the Final Semester irrespective of the number of arrears in any of the End Semester Examinations.
- Students shall be eligible to go to subsequent semesters as per the attendance rules prescribed by the Governing Body from time to time.

10. Requirements to take the End Semester Examinations

- a) A Student will be permitted to take the End Semester Examinations of any Semester if
- he secures at least 75% of attendance out of the 90 instructional days / 450 instructional hours during the particular Semester.
 - he earns a progress certificate from the Principal for having satisfactorily completed the prescribed course of study in the subjects as required by these Regulations, and
 - his conduct has been satisfactory.
- b) Students will be permitted to appear for Practical examinations only if they have attended 75% of the practical classes. A Student who has secured attendance of less than 75% but 65% and above shall be permitted to take the End Semester Examinations on the recommendation of the Head of the Department and approved by the Principal to condone the lack of attendance as well as on the payment of the prescribed condonation fee to the College.

A student who has secured an attendance of less than 65% but 55% and above is detained for that particular semester. He/She will be permitted to write the examinations in the next Odd / Even Semester by paying the prescribed condonation fee.

The Students who have an attendance of less than 55% are detained, and they shall REDO the semester after completion of the programme and after getting re-admission, that too at the sole discretion of the Principal. However, readmission will be allowed only during the respective semester of the programme. Those who redo the courses shall attend the special classes arranged by the HOD concerned.

The REDO students who have already completed their CIA Test and Practical Examination with at least minimum qualifying marks may be exempted from reappearing for the CIA Test and Practical Examination again in the readmitted Semester. However, if any student wishes to improve upon his

marks, he can appear for the CIA Test and Practical Examinations. In such a case, the original marks or the marks secured in the readmitted semester, whichever is higher, shall be taken as final marks.

11. Passing Minimum

Students shall be declared to have passed the whole examination if he passes all the papers and practicals, wherever prescribed / as per the scheme of examinations, by earning 140 CREDITS. He shall also complete one MOOC and fulfill the extension activities prescribed to qualify for the Degree.

In fixing the passing minimum, the following will be observed:

- a. There shall be no passing minimum for Internal Assessment.
- b. For End Semester Examinations, the passing minimum shall be **P** (minimum 40 % marks prescribed for the paper for each course / practical / project and Viva-voce).
- c. In aggregate (End Semester Examination + Internal Assessment) the passing minimum shall be **P** for each course.

12. Grading System

The marks earned by a candidate in the Internal Assessment and End Semester Examinations for each of the courses will be added. The marks thus obtained will then be converted into Letter Grades and Grade points as per the details given below:

Range of Marks	Letter Grade	Grade Points
96 – 100	O	10
86 – 95	A+	9
76 – 85	A	8
66 – 75	B+	7
56 – 65	B	6
50 – 55	C	5
40 – 49	P	4
00 – 39	F	0
Absent	Ab	0

The term Grading system indicates a seven-point scale of evaluation of the performances of students in terms of Grade Points secured in the Internal and External Examinations.

13. Classification of Successful Candidates

Successful Students who passed all the specified courses in a programme are classified as follows:

Passed all the courses with CGPA of 7.5 and

above without any arrears : First Class with Distinction

Passed all the courses with CGPA 6 to 7.4 : First Class

Passed all the courses with CGPA 5 to 5.9 : Second Class

Passed all the courses with CGPA 4 to 4.9 : Third Class

The total performance within a semester and continuous performance starting from the first semester are indicated respectively by Grade point Average (GPA) and Cumulative Grade point Average (CGPA). These two are calculated by the following formula.

$$GPA = \frac{\sum_i C_i G_i}{\sum_i C_i} = \frac{\text{Sum of the product of credits and grade points earned}}{\text{Sum of the credits of the courses in a Semester}}$$

$$CGPA = \frac{\sum_n \sum_i C_{ni} G_{ni}}{\sum_n \sum_i C_{ni}}$$

$$= \frac{\text{Sum of the product of the credits and grade points earned}}{\text{Sum of the credits for the entire programme}}$$

Where C_i is the credit earned for the course i in any semester, G_i is the grade point obtained by the student for the course i and n is the number of courses passed in that semester. CGPA is the GPA of all the courses starting from the first semester to the current semester.

**14. Choice Based Credit System (CBCS), Learning Outcomes Based Curriculum Framework (LOCF)
Guideline-Based Credit and Hours Distribution System for all UG courses including Lab Hours
First Year – Semester-I**

Part	List of Courses	Credit
Part-1	Language – Tamil	3
Part-2	English	3
Part-3	Core Courses & Elective Courses [in Total]	11
Part-4	Skill Enhancement Course SEC-1	6
	Foundation Course	
	Ability Enhancement Course	
		23

Semester-II

Part	List of Courses	Credit
Part-1	Language – Tamil	3
Part-2	English	3
Part-3	Core Courses and elective Courses, including laboratory [in Total]	11
Part-4	Skill Enhancement Course -SEC-2	6
	Skill Enhancement Course -SEC-3 (Discipline / Subject Specific)	
	Ability Enhancement Course	
		23

Second Year – Semester-III

Part	List of Courses	Credit
Part-1	Language - Tamil	3
Part-2	English	3
Part-3	Core Courses and elective Courses, including laboratory [in Total]	12
Part-4	Skill Enhancement Course -SEC-4 (Entrepreneurial Based)	4
	Skill Enhancement Course -SEC-5 (Discipline / Subject Specific)	
	E.V.S	
	Ability Enhancement Course	
		22

Semester-IV

Part	List of Courses	Credit
Part-1	Language - Tamil	3
Part-2	English	3
Part-3	Core Courses and elective Courses, including laboratory [in Total]	11
Part-4	Skill Enhancement Course -SEC-6 (Discipline / Subject Specific)	8
	Skill Enhancement Course -SEC-7 (Discipline / Subject	

	Specific)	
	E.V.S	
	Ability Enhancement Course	
		25

Third Year Semester-V

Part	List of Courses	Credit
Part-3	Core Courses, including Project / Elective	22
Part-4	Value Education	4
	Internship / Industrial Visit / Field Visit	
		26

Semester-VI

Part	List of Courses	Credit
Part-3	Core Courses, including Project / Elective & LAB	18
Part-4	Professional Competency Skill	2
Part- 5	Extension Activities	1
		21

15. Ranking

Students who pass all the examinations prescribed for the programme in the First Appearance alone are eligible for Ranking, provided in the case of candidates who pass all the examinations prescribed for the program with a break in the First Appearance due to shortage of attendance but his conduct has been satisfactory are also eligible for Classification. The marks obtained in Improvement Examinations will not be taken into consideration for Ranking.

15. The Medium of Instruction and Examinations

The medium of instruction and question paper shall be in English. The students having arrears in odd/even semesters can appear for such papers in the odd/even semester examination without any restrictions.

17. Submission of Record Notebooks for Practical Examinations

Students taking the Practical Examinations should submit Bonafide Record Note Books prescribed for the Practical Examinations. Otherwise, the students will not be permitted to take the Practical Examinations. However, in genuine cases where students could not submit the record notebooks may be permitted to take the Practical Examinations provided the Head of the Department and the Course Teacher concerned certify that the student has performed the experiments prescribed for the course.

For such Students who do not submit Record Books, zero marks will be awarded for record notebooks in the Practical Examination concerned.

In case a Student does not secure the prescribed passing minimum in the Practical Examination, the marks awarded for the Record Note Book at the time of the first appearance for the Practical Examination should be made available by the Head of the Department concerned at the subsequent appearance by the candidate.

18. Improvement of Marks in the Courses already passed

Students desirous of improving the marks secured in a passed course on their first attempt shall reappear once within a period of two subsequent semesters. The improved marks shall be considered for Classification / Distinction but not for ranking. If there is no improvement, there shall not be any change in the original marks already awarded. The fee for such appearances will be decided by the Governing Body from time to time. Students will not be allowed to improve marks in the Practical, Project, Viva-voce, and fieldwork.

19. MOOC

All the UG Students admitted from the academic year 2023-2024 shall have to complete one MOOC (SWAYAM /NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay) of a minimum of 4 weeks duration is mandatory during the programme as per the norms, to be eligible for obtaining the UG degree.

20. Self-Supportive Courses

The above Regulations shall apply to Students undergoing the respective self-supportive courses also.

21. Rank Holders

The student who secures the highest marks in aggregate of all the subjects in the first attempt of the autonomous examinations will be the Rank Holder. This applies to all UG/PG Programmes of our College. The Rank Holder will be awarded a certificate and prize.

22. Transitory Provision

Students who have joined the programme from the academic year 2023-24 will be permitted to appear for the examinations under this Regulation for a maximum period of **SIX** years. Thereafter, they will be permitted to appear for the examinations only under the new Regulations in force. The equivalent paper to be written will be decided by the Chairman of the respective Board of Studies. Such

candidates have to reregister for the programme. The fee for such re-registration will be decided by the Governing Body from time to time.

23. INTERNSHIP/INDUSTRIAL TRAINING

Objectives:

1. To improve the employability of students pursuing Undergraduate Degree Programme
2. To focus on outcome-based learning in degree Programmes.
3. To promote active linkage between the higher education system and industry, non-commercial and commercial enterprises/organisations.

General Provisions:

1. Any UG degree program in all disciplines as specified by the UGC under section 22 (3) of the UGC Act, 1956 is eligible to embed apprenticeship/ internship to the degree program.
2. An Internship/Industrial embedded degree program shall be treated at par with the UG degree Programmes specified by the UGC under section 22 (3) of the UGC Act, 1956.

Duration:

1. The Internship/Industrial training during the second-year vacation will help the students gain valuable work experience, that connects classroom knowledge to real-world experience and to narrow down and focus on the career path.
2. The period of Internship/Industrial training shall be of 30 hours duration apart from the regular teaching hours.
3. Students may commence their Internship/Industrial training from the II Semester holidays onwards.
4. The spells of Internship/Industrial training shall be scheduled either continuously or at intervals depending upon the requirement and practicality of the discipline concerned.

Credit Mechanism:

1. Credits for the Internship/Industrial Training programme shall be included in the total credits of the entire programme.
2. Two Credits for the degree programme should be assigned to apprenticeship/internship.

Programme	Duration	Credit	Total Marks	
Internship/Industrial Training Report	30 hours (Beyond Regular Teaching hours)	2	Viva	Project Report
			25	75

Evaluation of the Internship/Industrial Training Report

The Internship/Industrial Training reports for UG Degree Programme may be independent or group. In the case of group reports, a maximum of five Students in a group. The Title Page, Certificate by the student, and Certificate of Internship undertaken shall be in the format as prescribed by the Examination Cell.

The Internship / Industrial Training report should be countersigned by the Head of the Department and Principal and submitted to the Examination Cell. The external examiner is to be drawn from related faculty from affiliating University Departments / any affiliated college within the affiliating University jurisdiction.

Submission of Project Reports

Project with viva-voce component in the fifth semester enables the student application of conceptual knowledge to practical situations. The state of art technologies in conducting an experiment scientifically and systematically and arriving at a precise solution is ensured. Such innovative provisions of the project will give students an edge over their counterparts in the job market.

The projects for the UG degree programme may be independent or a group. In the case of group projects, a maximum of FIVE students are in a group. The format for the title page, certificate by the project advisor, and declaration by the candidate(s) shall be in the format as prescribed by the Examination Cell. The project reports duly countersigned by the Head of the Department concerned, and the Principal should be submitted to the office of the Controller of Examination within the specified date.

Regarding the evaluation of the Internship/Industrial training project report and project with a viva voce examination in the fifth semester, the total mark is 100. It is divided into 75 marks for project evaluation and 25 marks for the viva-voce examination. The marks for project work evaluation and viva-voce are to be awarded jointly by the internal examiner and the external examiner.

The external examiner is to be drawn from other related faculty from within the college / affiliating University Departments / any affiliated college within our University jurisdiction.

**QUESTION PAPER PATTERN FOR UG DEGREE
PROGRAMMES - 3 HOURS DURATION**

Part A	To answer All the 10 MCQs (Two questions from each UNIT)	10 x 1 = 10 Marks
Part B	To answer All the 5 questions (One question from each UNIT)	5 x 2 = 10 Marks
Part C	To answer All the 5 questions (either or type) (One question from each UNIT)	5 x 5 = 25 Marks
Part D	To answer 3 questions (out of 5 questions) (One question from each UNIT)	3 x10 = 30 Marks
TOTAL		75 Marks
(Equal Weightage should be given to each unit)		

Question paper Pattern for Courses, for which Online Examination is conducted:
50 MCQs (Answer All Questions) X 1.5 marks each = Total 75 Marks
Duration of the Exam = Two (2) Hours

ISLAMIAH COLLEGE (AUTONOMOUS)
COURSE STRUCTURE FOR UG PROGRAMMES
(CBCS PATTERN)
(For Students admitted from 2023 – 2024)

PROGRAMME OUTCOMES (POs) FOR B.A. ENGLISH

BY THE END OF THE PROGRAM, THE STUDENTS WILL BE ABLE TO

PO1: Disciplinary Knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate programme of study.

PO2: Critical Thinking: Capability to apply analytic thought to a body of knowledge; analyze and evaluate evidence, arguments, claims, and beliefs based on empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following a scientific approach to knowledge development.

PO3: Problem-Solving: Capacity to extrapolate from what one has learned and apply competencies to solve different kinds of non-familiar problems rather than replicate curriculum content knowledge and apply one's earnings to real-life situations.

PO4: Analytical Reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples and address opposing viewpoints.

PO5: Scientific Reasoning: Ability to analyze, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence, and experiences from an open-minded and reasoned perspective.

PO6: Self-directed & Lifelong Learning: Ability to work independently to identify and manage a project. Ability to acquire knowledge and skills, including "learning how to learn" through self-paced and self-directed learning aimed at personal development, meeting economic, social, and cultural objectives.

PO7: Reflective Thing: Critical sensibility to lived experiences, with self-awareness and reflexivity of both self and society

PO8: Reading & Projects: Document their reading and interpretive practices in assignments, translation works, and independent projects.

PO9: Confidence & Effectiveness: Confidently and effectively articulate their literary and textual experiences.

PO10: Social Skills & Empathetic Approach: Reorganize a professional and reflective

approach to leadership, responsibility, personal integrity, and self-regulation.

PROGRAMME SPECIFIC OUTCOMES:

PSO1: Acquire good knowledge and understanding to solve specific theoretical & applied problems in different areas of English Language and Literature.

PSO2: Understand, formulate, and develop mathematical arguments logically and use quantitative models to address issues arising in social sciences, business, and other contexts/fields.

PSO3: To prepare the students who will demonstrate respectful engagement with others' ideas, behaviors, and beliefs and apply diverse frames of reference to decisions and actions. To create effective entrepreneurs by enhancing their critical thinking, problem-solving, decision-making, and leadership skills that will facilitate startups and high-potential organizations.

PSO4: Developing a research framework and presenting their independent ideas effectively.

PSO5: Equipping their employability skills to excel in professions like teaching and exposing them to various activities to empower them through communication skills.

PSO6: Enabling a holistic perspective towards the socio-political inequalities and environmental issues

COURSE STRUCTURE FOR B.A. ENGLISH (For Students admitted from the academic year 2023-2024)									
Part	Category	Course Code	Course Title	Hrs./Week	Credit	Exam. Hrs.	CIA	ESE	TOTAL
SEMESTER I									
I	Generic Elective Languages (To choose 1 out of 4)	UCTATL11	Tamil I	6	3	3	25	75	100
		UCURTL11	Urdu I						
		UCARTL11	Arabic I						
		UCHDTL11	Hindi I						
II	English	UCENTL11	English I	4	3	3	25	75	100
III	Core Course 1	UCENTC11	Introduction to Literature	5	4	3	25	75	100
	Core Course 2	UCENTC12	Indian Writing in English	5	4	3	25	75	100
	Elective 1	UCENTA11	Allied - Social History of England	4	3	3	25	75	100
IV	Skill Enhancement Course SEC1	UCENTS11	Allied - Leadership Skills	2	2	3	25	75	100
	Foundation Course	UCENTF11	Bridge Course	2	2	3	25	75	100
	Ability Enhancement Course AEC1	UCSSTM11	Soft Skill - I	2	2	3	25	75	100
TOTAL				30	23	-	200	600	800
SEMESTER II									
I	Generic Elective Languages (To choose 1 out of 4)	UCTATL21	Tamil II	6	3	3	25	75	100
		UCURTL21	Urdu II						
		UCARTL21	Arabic II						
		UCHDTL21	Hindi II						

II	English	UCENTL21	English II	4	3	3	25	75	100
III	Core Course 3	UCENTC21	British Literature I	5	4	3	25	75	100
	Core Course 4	UCENTC22	American Literature I	5	4	3	25	75	100
	Elective 2	UCENTA21	Allied - History of English Literature	4	3	3	25	75	100
IV	Skill Enhancement Course SEC 2	UCENTS21	Allied - Business English	2	2	3	25	75	100
	Skill Enhancement Course SEC 3	UCENTS22	Technical Writing	2	2	3	25	75	100
	Ability Enhancement Course AEC2	UCSSTM21	Soft Skill - II	2	2	3	25	75	100
			TOTAL	30	23	-	200	600	800
SEMESTER III									
I	Generic Elective Languages (To choose 1 out of 4)	UCTATL31	Tamil III	6	3	3	25	75	100
		UCURTL31	Urdu III						
		UCARTL31	Arabic III						
		UCHDTL31	Hindi III						
II	English	UCENTL31	English III	4	3	3	25	75	100
III	Core Course 5	UCENTC31	British Literature-II	5	4	3	25	75	100
	Core Course 6	UCENTC32	American Literature I	4	4	3	25	75	100
	Elective 3	UCENTA31	Allied - Literary Genres and Terms	5	4	3	25	75	100
IV	Skill Enhancement Course SEC 4	UCENTS31	Entrepreneurial Skill	2	1	3	25	75	100
	Skill Enhancement Course SEC 5 [Online Exam]	UCENOS32	Employability Skills	1	1	2	25	75	100
	EVS	-	Environmental Studies	1	-	-	-	-	-
	Ability Enhancement Course AEC3	UCSSTM31	Soft Skill - III	2	2	3	25	75	100
			TOTAL	30	22	-	200	600	800

SEMESTER IV									
I	Generic Elective Tamil/ Language (To choose 1 out of 4)	UCTATL41	Tamil IV	6	3	3	25	75	100
		UCURTL41	Urdu IV						
		UCARTL41	Arabic IV						
		UCHDTL41	Hindi IV						
II	English	UCENTL41	English IV	4	3	3	25	75	100
III	Core Course 7	UCENTC41	World Literature in Translation	5	4	3	25	75	100
	Core Course 8	UCENTC42	Aspect of Language And Linguistics	5	4	3	25	75	100
	Elective 4	UCENTA41	Allied - The History of English Language	3	3	3	25	75	100
IV	Skill Enhancement Course SEC 6	UCENTS41	English for Competitive Examination	2	2	3	25	75	100

	Skill Enhancement Course SEC 7	UCENTS42	Computer Literacy	2	2	3	25	75	100
	EVS [Online Exam]	UCESOM41	Environmental Studies	1	2	2	25	75	100
	Ability Enhancement Course AEC4	UCSSTM41	Soft Skill - IV	2	2	3	25	75	100
			TOTAL	30	25	-	225	675	900
SEMESTER V									
III	Core Course 9	UCENTC51	Authors in Focus	5	4	3	25	75	100
	Core Course 10	UCENTC52	Women's Writing	5	4	3	25	75	100
	Core Course 11	UCENTC53	Indian Writing Translation	4	4	3	25	75	100
	Core Course 12	UCENJC51	Project With Viva Voce	4	4	3	25	75	100
	Discipline Specific Elective 1	UCENTE51	The Great Women Writer in the World Literature	4	3	3	25	75	100
	Discipline Specific Elective 2	UCENTE52	Literary Movements in English	4	3	3	25	75	100
IV	VED [Online Exam]	UCVEOM51	Value Education	2	2	2	25	75	100
	Summer Internship/Industrial Training	UCENIM51	Internship/Industrial Training	2	2	3	25	75	100
			TOTAL	30	26	-	200	600	800
SEMESTER VI									
III	Core Course 13	UCENTC61	Introduction to Literary Theory and Criticism	6	5	3	25	75	100
	Core Course 14	UCENTC62	Journalism and Mass Communication	6	5	3	25	75	100
	Core Course 15	UCENTC63	Creative Writing	6	3	3	25	75	100
	Discipline Specific Elective 3	UCENTE61	New Criticism in Contemporary Literature	5	3	3	25	75	100
	Discipline Specific Elective 4	UCENTE62	Interpreting Drama	5	2	3	25	75	100
IV	Professional Competency [Online Exam]	UCENOP61	General Studies for Competitive Examinations	2	2	2	25	75	100
V	Extension Activity	UCEXAM61	Extension Activity	-	1	-	25	75	100
	SWAYAM /NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC [Mandatory Online Course to be eligible for obtaining the UG degree.]								
			TOTAL	30	21	-	175	525	700
			Grand Total	180	140	-	1200	3600	4800

MAPPING CORRELATION BENCHMARK

Mapping	1-30%	31-60%	61-70%	71-100%
Matches	1-24	25-50	51-56	57-80
Correlation	Poor	Moderate	High	Very High

(PSOs)	Programme Outcomes (POs)									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
PSO1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PSO2	✓	-	✓	✓	✓	✓	✓	✓	✓	✓
PSO3	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
PSO4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PSO5	✓	✓	✓	✓	✓	-	✓	✓	✓	✓
PSO6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Number of Matches = 57 , Correlation: Very High										

PROGRAMME OUTCOMES FOR B.A. HISTORY

PROGRAMME OUTCOMES:

PO1: Theoretical Knowledge of History: Ability to understand different history theories and application of History to society. To develop an adequate competency in the different Historical approaches.

PO2: Analytical Reasoning and Critical Thinking: Critically Analyze and assess how economists examine the real world to understand current events and evaluate specific proposals.

PO3: Logical Reasoning and Quantitative Ability: Ability to understand how to collect and analyze data and use empirical evidence to evaluate the validity of a hypothesis, using Quantitative Methodology and conducting data analysis to interpret results.

PO4: Communication and Research Skills: Communication and Research-related skills. Developing a sense of capability for relevant/appropriate inquiry and asking questions, synthesizing and, articulating and reporting results and efficiently communicating thoughts and ideas clearly and concisely.

PO5: Gender, Environment and Sustainability: Comprehend the Environmental issues and Sustainable Development, strive to achieve economic and social equity for women, and be Gender Sensitive.

PO6: Employability and Leadership Skills: Become empowered individuals to be employed in various positions in industry, academia and research and have the potential to become Entrepreneurs and take leadership roles in their chosen occupations and communities.

PO7: Social Interaction: Acquire the ability to engage in relevant conversations and have the ability to understand the views of society that would help initiate policy making.

PO8: Digital Literacy and Lifelong Learning: Capability to use ICT tools in a variety of learning situations and use appropriate software for analysis of data - Ability to acquire Knowledge situations and skills for life through self-directed learning and adapt to different learning environments.

PROGRAMME SPECIFIC OUTCOMES:

PSO1: To enable students to apply different Historical theories in real-life situations and decision-making circumstances.

PSO 2: To sensitize students to various world issues related to Development, Growth, International Economics, Sustainable Development and Environment.

PSO 3: To familiarize students with the concepts and theories of good governance, Modern Administrations and the construction of an ideal society.

PSO 4: Evaluate various social and economic problems in society and develop answers to the problems as global citizens.

PSO 5: Enhance skills of analytical and critical thinking to analyze the effectiveness of policies of the government.

MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES

Programme Outcomes (POs)

Programme Specific Outcomes (PSOs)	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
PSO 1	3	3	3	2	3	2	2	2
PSO 2	3	3	3	2	3	2	2	2
PSO3	3	3	3	2	2	3	3	2
PSO 4	3	3	2	3	3	3	3	3
PSO 5	3	3	2	3	3	3	3	3

(3 – Strong) (2 – Medium) (1 – Low)

COURSE STRUCTURE FOR B.A. HISTORY (For Students admitted from the academic year 2023-2024)									
Part	Category	Course Code	Course Title	Hrs./Week	Credit	Exam. Hrs.	CIA	ESE	TOTAL
SEMESTER I									
I	Generic Elective Tamil/ Language (To choose 1 out of 4)	UCTATL11	Tamil I	6	3	3	25	75	100
		UCURTL11	Urdu I						
		UCARTL11	Arabic I						
		UCHDTL11	Hindi I						
II	English	UCENTL11	English I	4	3	3	25	75	100
III	Core Course 1	UCHITC11	History of Ancient India up to 1206 CE	5	4	3	25	75	100
	Core Course 2	UCHITC12	History of Tamil Nadu up to 1311 CE	5	4	3	25	75	100
	Elective 1	UCHITA11	Allied: Studies on States and Governments	4	3	3	25	75	100
IV	Skill Enhancement Course SEC 1	UCHITS11	Introduction to Tourism	2	2	3	25	75	100
	Foundation Course	UCHITF11	Introduction to History	2	2	3	25	75	100
	Ability Enhancement Course AEC1	UCSSTM11	Soft Skill I	2	2	3	25	75	100
			TOTAL	30	23	-	200	600	800
SEMESTER II									
I	Generic Elective Tamil/ Language (To choose 1 out of 4)	UCTATL21	Tamil II	6	3	3	25	75	100
		UCURTL21	Urdu II						
		UCARTL21	Arabic II						
		UCHDTL21	Hindi II						
II	English	UCENTL21	English II	4	3	3	25	75	100
III	Core Course 3	UCHITC21	History of Medieval India – 1206-1707 CE	5	4	3	25	75	100
	Core Course 4	UCHITC22	History of Tamil Nadu – 1311 – 1800 CE	5	4	3	25	75	100
	Elective 2	UCHITA21	Allied: Western Political Thought	4	3	3	25	75	100
IV	Skill Enhancement Course SEC 2	UCHITS21	Indian Constitution	2	2	3	25	75	100
	Skill Enhancement Course SEC 3	UCHITS22	Basic Journalism	2	2	3	25	75	100
	Ability Enhancement Course AEC2	UCSSTM21	Soft Skill II	2	2	3	25	75	100
			TOTAL	30	23	-	200	600	800

SEMESTER III									
I	Generic Elective Tamil/ Language (To choose 1 out of 4)	UCTATL31	Tamil III	6	3	3	25	75	100
		UCURTL31	Urdu III						
		UCARTL31	Arabic III						
		UCHDTL31	Hindi III						
II	English	UCENTL31	English III	4	3	3	25	75	100
III	Core Course 5	UCHITC31	History of India -1707-1857 CE	5	4	3	25	75	100
	Core Course 6	UCHITC32	History of Tamil Nadu since 1801 CE	4	4	3	25	75	100
	Elective 3	UCHITA31	Allied: Indian Political Thought	5	4	3	25	75	100
IV	Skill Enhancement Course SEC 4	UCHITS31	Entrepreneurship Development	2	1	3	25	75	100
	Skill Enhancement Course SEC 5 [Online Exam]	UCHIOS32	Introduction to Management	1	1	2	25	75	100
	EVS	-	Environmental Studies	1	-	-	-	-	-
	Ability Enhancement Course AEC3	UCSSTM31	Soft Skill III	2	2	3	25	75	100
TOTAL				30	22	-	200	600	800

SEMESTER IV									
I	Generic Elective Tamil/ Language (To choose 1 out of 4)	UCTATL41	Tamil IV	6	3	3	25	75	100
		UCURTL41	Urdu IV						
		UCARTL41	Arabic IV						
		UCHDTL41	Hindi IV						
II	English	UCENTL41	English I	4	3	3	25	75	100
III	Core Course 7	UCHITC41	Freedom Struggle in India	5	4	3	25	75	100
	Core Course 8	UCHITC42	History of Modern Europe- 1789-1919 CE	5	4	3	25	75	100
	Elective 4	UCHITA41	Allied: Modern Governments	3	3	3	25	75	100
IV	Skill Enhancement Course SEC 6	UCHITS41	Computer Training	2	2	3	25	75	100
	Skill Enhancement Course SEC 7	UCHITS42	Tourism and Hotel Management	2	2	3	25	75	100
	EVS [Online Exam]	UCESOM41	Environmental Studies	1	2	2	25	75	100
	Ability Enhancement Course AEC4	UCSSTM41	Soft Skill IV	2	2	3	25	75	100
TOTAL				30	25	-	225	675	900
SEMESTER V									

III	Core Course 9	UCHITC51	History of the World 1919-2020 CE	5	4	3	25	75	100
	Core Course 10	UCHITC52	Selected Themes in History of U.S.A	5	4	3	25	75	100
	Core Course 11	UCHITC53	Regional History (History of Chennai)	4	4	3	25	75	100
	Core Course 12	UCHIJC51	Project with Viva voce	4	4	3	25	75	100
	Discipline Specific Elective 1	UCHITE51/ UCHITE52	Elements of Human Rights/ History of the Arabs from CE 500 to 750	4	3	3	25	75	100
	Discipline Specific Elective 2	UCHITE53/ UCHITE54	History of Dravidian Movement/History of Revolutions	4	3	3	25	75	100
IV	VED [Online Exam]	UCVEOM51	Value Education	2	2	2	25	75	100
	Summer Internship/Industrial Training	UCHIIM51	Internship/ Industrial Training	2	2	3	25	75	100
			TOTAL	30	26	-	200	600	800
SEMESTER VI									
III	Core Course 13	UCHITC61	Contemporary History of India	6	5	3	25	75	100
	Core Course 14	UCHITC62	India and Her Neighbours	6	5	3	25	75	100
	Core Course 15	UCHITA63	History of Science and Technology in India	6	3	3	25	75	100
	Discipline-Specific Elective 3	UCHITE61/ UCHITE62	International Relations since 1919/ History of the Arabs from CE 750 to 1258	5	3	3	25	75	100
	Discipline Specific Elective 4	UCHITE63/ UCHITE64	History of China and Japan/History of Pondicherry	2	2	3	25	75	100
IV	Professional Competency [Online Exam]	UCHIOP61	General Studies for Competitive Examinations	2	2	2	27	75	100
V	Extension Activity	UCEXAM61	Extension Activity	-	1	-	25	75	100
	SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC[Mandatory Online Course to be eligible for obtaining the UG degree]								
			TOTAL	30	21	-	175	525	700
			Grand Total	180	140	-	1200	3600	4800

**PROGRAMME OUTCOMES FOR BACHELOR OF BUSINESS ADMINISTRATION,
B.Com. GENERAL, B.Com. COMPUTER APPLICATIONS AND B.Com. FINANCE & ACCOUNTS**

PROGRAMME OUTCOMES:

- PO1: Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of Commerce and Management.
- PO2: Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information clearly and concisely to different groups.
- PO3: Critical thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, and beliefs based on empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following a scientific approach to knowledge development.
- PO4: Problem-solving: Capacity to extrapolate from what one has learned and apply competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's learning to real-life situations.
- PO5: Analytical reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and address opposing viewpoints.
- PO6: Research-related skills: A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating; Ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation
- PO7: Cooperation/Teamwork: Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group, and act together as a group or a team in the interests of a common cause and work efficiently as a member of a team
- PO8: Scientific reasoning: Ability to analyse, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective.
- PO9: Reflective thinking: Critical sensibility to lived experiences, with self-awareness and reflexivity of both self and society.
- PO10 Information/digital literacy: Capability to use ICT in a variety of learning situations, demonstrate ability to access, evaluate, and use a variety of relevant information sources; and use appropriate software for analysis of data.

PO11 Self-directed learning: Ability to work independently, identify appropriate resources required for a project, and manage a project through to completion.

PO12 Multicultural competence: Possess knowledge of the values and beliefs of multiple cultures and a global perspective; and capability to effectively engage in a multicultural society and interact respectfully with diverse groups.

PO13: Moral and ethical awareness/reasoning: Ability to embrace moral/ethical values in conducting one's life, formulate a position/argument about an ethical issue from multiple perspectives, and use ethical practices in all work. Capable of demonstrating the ability to identify ethical issues related to one's work, avoid unethical behaviour such as fabrication, falsification or misrepresentation of data or committing plagiarism, not adhering to intellectual property rights; appreciating environmental and sustainability issues; and adopting objective, unbiased and truthful actions in all aspects of work.

PO14: Leadership readiness/qualities: Capability for mapping out the tasks of a team or an organization, setting direction, formulating an inspiring vision, building a team who can help achieve the vision, motivating and inspiring team members to engage with that vision, and using management skills to guide people to the right destination, smoothly and efficiently.

PO15: Lifelong learning: Ability to acquire knowledge and skills, including "learning how to learn", that is necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to changing trades and demands of the workplace through knowledge/skill development/rescaling.

PROGRAMME SPECIFIC OUTCOMES:

PSO1: Develop a strong foundation in management principles and theories, gaining comprehensive knowledge of various domains within the field of business administration.

PSO2: Cultivate effective communication skills, both written and oral, enabling students to articulate their thoughts and ideas clearly and persuasively in professional settings.

PSO3: Acquire advanced digital and managerial skills, empowering students to adapt to the rapidly evolving business landscape and excel in diverse managerial roles.

PSO4: Foster a deep understanding of ethical and moral values, enabling students to make principled decisions and uphold integrity in their personal and professional lives.

PSO5: Nurture critical thinking abilities, empowering students to analyze complex business challenges, devise innovative solutions, and address diverse perspectives effectively.

PSO6: Develop research-related skills, promoting an inquisitive mindset, and the ability to investigate business-related issues, gather relevant data, and draw meaningful conclusions.

PSO7: Cultivate cooperation and teamwork abilities, fostering effective collaboration in diverse teams to achieve common objectives.

PSO8: Enhance scientific reasoning, enabling students to analyze and interpret quantitative and qualitative data to support informed business decisions.

PSO9: Encourage reflective thinking, promoting self-awareness and sensitivity to societal impacts in the context of management practices.

PSO10: Instill information and digital literacy, equipping students with the capability to access, evaluate, and utilize information effectively in a technology-driven business environment.

PSO11: Develop self-directed learning skills, empowering students to take initiative, identify resources, and manage projects independently for continuous personal and professional growth.

PSO12: Cultivate multicultural competence, fostering an appreciation for diverse cultural values and perspectives, and the ability to engage respectfully in a globalized business environment.

PSO13: Foster moral and ethical awareness, promoting responsible and principled conduct in various business scenarios, and adhering to ethical practices and environmental sustainability.

PSO14: Cultivate leadership readiness and qualities, enabling students to map out tasks, formulate inspiring visions, build effective teams, and guide them towards successful outcomes.

PSO15: Instill a commitment to lifelong learning, equipping students with the ability to adapt to evolving demands and acquire new knowledge and skills throughout their professional journeys.

BUSINESS ADMINISTRATION [BBA] PO – PSO MAPPING

Correlation Matrix	POs (Commerce & Management Programmes)														
PSOs (BBA)	PO 1 Discipline Knowledge	PO 2 Communication Skill	PO 3 Critical Thinking	PO 4 Problem Solving	PO 5 Analytical Skill	PO 6 Research Skill	PO 7 Teamwork	PO 8 Scientific Reasoning	PO 9 Reflective Thinking	PO 10 Digital Skill	PO 11 Self Learning	PO 12 Diverse Competence	PO 13 Moral Values	PO 14 Leadership	PO 15 Lifelong Learning
PO1	3	1	1	1	1	3	1	1	1	1	2	1	1	1	1
PO2	1	3	1	1	1	1	2	1	1	1	2	2	1	3	2
PO3	1	1	3	1	1	1	2	2	1	3	2	1	1	1	2
PO4	1	1	1	3	1	1	2	1	2	1	2	1	3	1	2
PO5	1	1	1	1	3	1	2	1	3	1	1	2	1	1	2
PO6	3	1	1	1	1	3	2	1	1	1	2	1	1	1	2
PO7	1	2	2	2	2	2	3	1	2	1	3	2	1	1	2

PO8	1	1	2	1	2	1	1	3	1	3	1	1	2	1	2
PO9	1	1	1	2	1	1	2	1	3	1	2	2	1	1	2
PO10	1	1	3	1	1	1	1	3	1	3	2	1	3	1	2
PO11	2	2	2	2	2	2	3	1	2	2	3	2	1	3	2
PO12	1	2	2	1	1	1	2	1	2	1	1	3	1	1	2
PO13	1	1	1	3	1	1	1	2	2	3	1	1	3	1	2
PO14	1	3	1	1	1	1	1	1	1	1	3	1	3	3	2
PO15	2	2	2	2	2	2	3	2	2	2	3	2	1	2	3

3 – Strong, 2- Medium, 1- Low

Overall, there is a strong correlation between several Program Outcomes (POs) and their corresponding Program Specific Outcomes (PSOs). The program seems to be well-designed to align the general learning objectives (POs) with the specific outcomes tailored to the field of Commerce and Management (PSOs). Some POs have a medium correlation, indicating that they may contribute to multiple PSOs without a direct one-to-one relationship. The overall alignment between the POs and PSOs suggests that the program is likely to provide students with a comprehensive and well-rounded education in Business Administration.

COURSE STRUCTURE FOR BUSINESS ADMINISTRATION [BBA] (For Students admitted from the academic year 2023-2024)									
Part	Category	Course Code	Course Title	Hrs./Week	Credit	Exam. Hrs.	CIA	ESE	TOTAL
Semester I									
I	Generic Elective Languages (To choose 1 out of 4)	UCTATL11	Tamil I	6	3	3	25	75	100
		UCURTL11	Urdu I						
		UCARTL11	Arabic I						
		UCHDTL11	Hindi I						
II	English	UCENTL11	English I	4	3	3	25	75	100
III	Core Course 1	UCBATC11	Principles of Management	5	4	3	25	75	100
	Core Course 2	UCBATC12	Accounting for Managers I	5	4	3	25	75	100
	Elective 1	UCBATA11	Allied: Managerial Economics	4	3	3	25	75	100
IV	Skill Enhancement Course SEC 1	UCBATS11	Managerial Communication	2	2	3	25	75	100
	Foundation Course	UCBATF11	Basics of Event Management	2	2	3	25	75	100
	Ability Enhancement Course AEC1	UCSSTM11	Soft Skill I	2	2	3	25	75	100
			TOTAL	30	23	-	200	600	800
Semester II									
I	Generic Elective Languages (To choose 1 out of 4)	UCTATL21	Tamil II	6	3	3	25	75	100
		UCURTL21	Urdu II						
		UCARTL21	Arabic II						
		UCHDTL21	Hindi II						
II	English	UCENTL21	English II	4	3	3	25	75	100
III	Core Course 3	UCBATC21	Marketing management	5	4	3	25	75	100
	Core Course 4	UCBATC22	Accounting for Managers II	5	4	3	25	75	100
	Elective 2	UCBATA21	Allied: International Business	4	3	3	25	75	100
IV	Skill Enhancement Course SEC 2	UCBATS21	Managerial Skill Development	2	2	3	25	75	100
	Skill Enhancement Course SEC 3	UCBATS22	Business Etiquette and Corporate Grooming	2	2	2	25	75	100
	Ability Enhancement Course AEC2	UCSSTM21	Soft Skill II	2	2	3	25	75	100
			TOTAL	30	23	-	200	600	800
Semester III									
I	Generic Elective Languages (To choose 1 out of 4)	UCTATL31	Tamil III	6	3	3	25	75	100
		UCURTL31	Urdu III						
		UCARTL31	Arabic III						
		UCHDTL31	Hindi III						
II	English	UCENTL31	English III	4	3	3	25	75	100
III	Core Course 5	UCBATC31	Organisational Behaviour	5	4	3	25	75	100
	Core Course 6	UCBATC32	Financial Management	4	4	3	25	75	100
	Elective 3	UCBATA31	Allied: Business Statistics	5	4	3	25	75	100
IV	Skill Enhancement	UCBATS31	Computer Applications in Business	2	1	3	25	75	100

	Course SEC 4								
	Skill Enhancement Course SEC 5	UCBAPS32	Tally – Basis – Lab	1	1	2	25	75	100
	EVS	-	Environmental Studies	1	-	-	-	-	-
	Ability Enhancement Course AEC3	UCSSTM31	Soft Skill III	2	2	3	25	75	100
			TOTAL	30	22	-	200	600	800

Semester IV									
I	Generic Elective Languages (To choose 1 out of 4)	UCTATL41	Tamil IV	6	3	3	25	75	100
		UCURTL41	Urdu IV						
		UCARTL41	Arabic IV						
		UCHDTL41	Hindi IV						
II	English	UCENTL41	English I	4	3	3	25	75	100
III	Core Course 7	UCBATC41	Business Environment	5	4	3	25	75	100
	Core Course 8	UCBATC42	Business Regulatory Frame Work	5	4	3	25	75	100
	Elective 4	UCBATA41	Allied: Operations Research	3	3	3	25	75	100
IV	Skill Enhancement Course SEC 6	UCBAPS41	Tally – Advanced Lab	2	2	3	25	75	100
	Skill Enhancement Course SEC 7	UCBATS42	Intellectual Property Rights	2	2	3	25	75	100
	EVS [Online Exam]	UCESOM41	Environmental Studies	1	2	2	25	75	100
	Ability Enhancement Course AEC4	UCSSTM41	Soft Skill IV	2	2	3	25	75	100
			TOTAL	30	25	-	200	600	800
Semester V									
III	Core Course 9	UCBATC51	Human Resource Management	5	4	3	25	75	100
	Core Course 10	UCBATC52	Research Methodology	5	4	3	25	75	100
	Core Course 11	UCBATC53	Business Taxation	4	4	3	25	75	100
	Core Course 12	UCBATC54	Management Information System	4	4	3	25	75	100
	Discipline Specific Elective 1	UCBATE51/ UCBATE52/ UCBATE53	Digital Marketing/Industrial Relations/Financial Services	4	3	3	25	75	100
	Discipline Specific Elective 2	UCBAJC51	Project with Viva voce	4	3	3	25	75	100
IV	VED [Online Exam]	UCVEOM51	Value Education	2	2	2	25	75	100
	Summer Internship/ Industrial Training	UCBAIM51	Internship/Industrial Training	2	2	3	25	75	100
			TOTAL	30	26	-	200	600	800

Semester VI									
III	Core Course 13	UCBATC61	Entrepreneurial Development	6	5	3	25	75	100
	Core Course 14	UCBATC62	Services Marketing	6	5	3	25	75	100
	Core Course 15	UCBATC63	Production and Material Management	6	3	3	25	75	100
	Discipline Specific Elective 3	UCBATE61/ UCBATE62/ UCBATE63	Consumer Behaviour/Innovation management/Security Analysis & Portfolio Management	5	3	3	25	75	100
	Discipline Specific Elective 4	UCBATE64/ UCBAPE65	Fundamentals of Logistics/ E-business/MS Office -Lab	5	2	3	25	75	100
IV	Professional Competency [Online Exam]	UCBAOP61	General Awareness for Competitive Examinations	2	2	2	25	75	100
V	Extension Activity	UCEXAM61	Extension Activity	-	1	-	25	75	100
	SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC [Mandatory Online Course to be eligible for obtaining the UG degree]								
			TOTAL	30	21	-	175	525	700
			Grand Total	180	140	-	1200	3600	4800

B.Com. GENERAL DEGREE PROGRAMME
PROGRAMME SPECIFIC OUTCOMES:

PSO1 – Placement: To prepare the students who will demonstrate respectful engagement with others' ideas, behaviours, and beliefs and apply diverse frames of reference to decisions and actions.

PSO 2 - Entrepreneur: To create effective entrepreneurs by enhancing their critical thinking, problem-solving, decision making and leadership skill that will facilitate startups and high-potential organizations

PSO3 – Research and Development: Design and implement HR systems and practices grounded in research that complies with employment laws, leading the organization towards growth and development.

PSO4 – Contribution to Business World: To produce employable, ethical and innovative professionals to sustain in the dynamic business world.

PSO5 – Contribution to the Society: To contribute to the development of society by collaborating with stakeholders for mutual benefit

MAPPING OF PSOS WITH POS

PO	PSO				
	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
PO 1	3	3	1	3	3
PO 2	3	3	1	3	2
PO 3	2	2	2	2	1
PO 4	3	3	1	3	3
PO 5	2	2	1	2	2
PO 6	1	1	1	1	1
PO 7	2	2	2	2	2
PO 8	1	1	2	2	2
PO 9	1	1	2	2	2
PO 10	3	3	3	3	3
PO 11	2	1	2	2	2
PO 12	1	2	1	1	1
PO 13	2	3	2	3	3
PO 14	2	3	2	3	2
PO 15	2	2	1	2	2
Total	30	32	23	34	31
Average	2	2.13	1.92	2.27	2.07

COURSE STRUCTURE FOR B.Com. (For Students admitted from the academic year 2023-2024)									
Part	Category	Course Code	Course Title	Hrs./Week	Credit	Exam. Hrs.	CIA	ESE	TOTAL
SEMESTER I									
I	Generic Elective Tamil/ Language (To choose 1 out of 4)	UCTATL11	Tamil I	6	3	3	25	75	100
		UCURTL11	Urdu I						
		UCARTL11	Arabic I						
		UCHDTL11	Hindi I						
II	English	UCENTL11	English I	4	3	3	25	75	100
III	Core Course 1	UCCOTC11	Financial Accounting I	5	4	3	25	75	100
	Core Course 2	UCCOTC12	Principles of Management	5	4	3	25	75	100
	Elective 1	UCCOTA11/ UCCOTA12/ UCCOTA13	Allied: Business Economics/Indian Economic Development/ Business Organisation	4	3	3	25	75	100
IV	Skill Enhancement Course SEC 1	UCCOTS11	E-Business	2	2	3	25	75	100
	Foundation Course	UCCOTF11	Basics of Commerce	2	2	3	25	75	100
	Ability Enhancement Course AEC1	UCSSTM11	Soft Skill I	2	2	3	25	75	100
			TOTAL	30	23	-	200	600	800
SEMESTER II									
I	Generic Elective Tamil/ Language (To choose 1 out of 4)	UCTATL21	Tamil II	6	3	3	25	75	100
		UCURTL21	Urdu II						
		UCARTL21	Arabic II						
		UCHDTL21	Hindi II						
II	English	UCTENL21	English II	4	3	3	25	75	100
III	Core Course 3	UCCOTC21	Financial Accounting II	5	4	3	25	75	100
	Core Course 4	UCCOTC22	Business Law	5	4	3	25	75	100
	Elective 2	UCCOTA21/ UCCOTA22/ UCCOTA23	Allied: Business Environment/ Insurance and Risk Management/Internati onal Trade	4	3	3	25	75	100
IV	Skill Enhancement Course SEC 2	UCCOPS21	Computer Literacy in Commerce - Lab	2	2	3	25	75	100
	Skill Enhancement Course SEC 3	UCCOTS22	Business Communication	2	2	3	25	75	100

	Ability Enhancement Course AEC2	UCSSTM21	Soft Skill II	2	2	3	25	75	100
			TOTAL	30	23	-	200	600	800
SEMESTER III									
I	Generic Elective Tamil/ Language (To choose 1 out of 4)	UCTATL31	Tamil III	6	3	3	25	75	100
		UCURTL31	Urdu III						
		UCARTL31	Arabic III						
		UCHDTL31	Hindi III						
II	English	UCENTL31	English III	4	3	3	25	75	100
III	Core Course 5	UCCOTC31	Corporate Accounting I	5	4	3	25	75	100
	Core Course 6	UCCOTC32	Company Law	4	4	3	25	75	100
	Elective 3	UCCOTA31 / UCCOTA32 / UCCOTA33	Allied: Business Mathematics & Statistics / Business Legislation/ E-Commerce	5	4	3	25	75	100
IV	Skill Enhancement Course SEC 4	UCCOPS31	Computerised Accounting I - Lab	2	1	3	25	75	100
	Skill Enhancement Course SEC 5 [Online Exam]	UCCOOS32	Personality Development	1	1	2	25	75	100
	EVS		Environmental Studies	1	-	-	-	-	-
	Ability Enhancement Course AEC3	UCSSTM31	Soft Skill III	2	2	3	25	75	100
			TOTAL	30	22	-	200	600	800
SEMESTER IV									
I	Generic Elective Tamil/ Language (To choose 1 out of 4)	UCTATL41	Tamil IV	6	3	3	25	75	100
		UCURTL41	Urdu IV						
		UCARTL41	Arabic IV						
		UCHDTL41	Hindi IV						
II	English	UCENTL41	English I	4	3	3	25	75	100
III	Core Course 7	UCCOTC41	Corporate Accounting II	5	4	3	25	75	100
	Core Course 8	UCCOTC42	Principles of Marketing	5	4	3	25	75	100
	Elective 4	UCCOTA41 / UCCOTA42 / UCCOTA43	Allied: Financial Services/Consumerism & Consumer Protection/Operations Research	3	3	3	25	75	100
IV	Skill Enhancement Course SEC 6	UCCOPS41	Computerised Accounting II – Tally Lab	2	2	3	25	75	100
	Skill Enhancement Course SEC 7	UCCOTS42	Employability Skills	2	2	2	25	75	100
	EVS [Online Exam]	UCESOM41	Environmental Studies	1	2	2	25	75	100
	Ability Enhancement Course AEC4	UCSSTM41	Soft Skill IV	2	2	3	25	75	100
			TOTAL	30	25	-	225	675	900

SEMESTER V									
III	Core Course 9	UCCOTC51	Cost Accounting I	5	4	3	25	75	100
	Core Course 10	UCCOTC52	Banking Law and Practice	5	4	3	25	75	100
	Core Course 11	UCCOTC53	Income Tax Law and Practice I	4	4	3	25	75	100
	Core Course 12	UCCOJC51 / UCCOTC54	Project with Viva Voce/Auditing and Corporate Governance	4	4	3	25	75	100
	Discipline Specific Elective 1	UCCOTE51/ UCCOTE52	Financial Management/ Indirect Taxation	4	3	3	25	75	100
	Discipline Specific Elective 2	UCCOTE53/ UCCOTE54	Human Resource Management/ Office Management & Secretarial Practice	4	3	3	25	75	100
IV	VED [Online Exam]	UCVEOM51	Value Education	2	2	2	25	75	100
	Summer Internship/Industrial Training	UCCOIM51	Internship/ Industrial Training	2	2	3	25	75	100
TOTAL				30	26	-	200	600	800
Semester VI									
III	Core Course 13	UCCOTC61	Cost Accounting II	6	5	3	25	75	100
	Core Course 14	UCCOTC62	Management Accounting	6	5	3	25	75	100
	Core Course 15	UCCOTC63	Income Tax Law and Practice II	6	3	3	25	75	100
	Discipline Specific Elective 3	UCCOTE61/ UCCOPE62	Entrepreneurial Development/ Computer Application in Business - Lab	5	3	3	25	75	100
	Discipline Specific Elective 4	UCCOPE63/ UCCOTE64	Spreadsheet for Business - Lab / Logistics and Supply Chain Management/	5	2	3	25	75	100
IV	Professional Competency [Online exam]	UCCOOP61	General Awareness for Competitive Examinations	2	2	2	25	75	100
V	Extension Activity	UCEXAM61	Extension Activity	-	1	-	25	75	100
SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC[Mandatory Online Course to be eligible for obtaining the UG degree]									
TOTAL				30	21	-	175	525	700
Grand Total				180	140	-	1200	3600	4800

**B.Com. COMPUTER APPLICATION
PROGRAMME SPECIFIC OUTCOMES:**

PSO1 – Placement: To prepare the students who will demonstrate respectful engagement with others’ ideas, behaviours, and beliefs and apply diverse frames of reference to decisions and actions.

PSO 2 - Entrepreneur: To create effective entrepreneurs by enhancing their critical thinking, problem-solving, decision making and leadership skill that will facilitate startups and high-potential organizations

PSO3 – Research and Development: Design and implement HR systems and practices grounded in research that comply with employment laws, leading the organization towards growth and development.

PSO4 – Contribution to Business World: To produce employable, ethical and innovative professionals to sustain in the dynamic business world.

PSO 5 – Contribution to the Society: To contribute to the development of society by collaborating with stakeholders for mutual benefit

PSO6: Conduct business by adhering to various Legal and Regulatory Guidelines in the digital era.

PSO7: Exhibit Entrepreneurship Skills.

PSO8: Apply Optimal Costing Methods for better decision-making.

PSO9: Apply Income Tax Provision to estimate the Tax Liability of Individuals and MSMEs.

PSO10: Perform Business Activities efficiently and effectively in the digital Era with the help of ICT.

MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES

Program Specific Outcomes(PS Os)	Program Outcomes (POs)									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
PSO1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PSO2	✓	✓	✓	✓		✓			✓	
PSO3	✓	✓		✓		✓				
PSO4	✓	✓		✓		✓	✓		✓	
PSO5	✓	✓	✓	✓		✓				
PSO6	✓	✓						✓		✓
PSO7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PSO8	✓			✓		✓	✓	✓		
PSO9	✓	✓	✓	✓		✓		✓		
PSO10	✓	✓	✓	✓	✓	✓	✓		✓	
Number of Matches = 64, Correlation: High										

MAPPING BENCHMARK

Mapping	1-30%	31-60%	61-70%	71-100%
Matches	1-30	31-60	61-70	71-100
Correlation	Poor	Moderate	High	Very High

COURSE STRUCTURE FOR B.Com. COMPUTER APPLICATIONS (For Students admitted from the academic year 2023-2024)									
Part	Category	Course Code	Course Title	Hrs./Week	Credit	Exam. Hrs.	CIA	ESE	TOTAL
SEMESTER I									
I	Generic Elective Languages (To choose 1 out of 4)	UCTATL11	Tamil I	6	3	3	25	75	100
		UCURTL11	Urdu I						
		UCARTL11	Arabic I						
		UCHDTL11	Hindi I						
II	English	UCENTL11	English I	4	3	3	25	75	100
III	Core Course 1	UCCATC11	Financial Accounting I	5	4	3	25	75	100
	Core Course 2	UCCATC12	Principles of Management	5	4	3	25	75	100
	Elective 1	UCCAPA11/ UCCAPA12/	Allied: Office Automation and Lab/Programming in C and Lab	4	3	3	25	75	100
IV	Skill Enhancement Course SEC 1	UCCATS11	Indian Constitution	2	2	3	25	75	100
	Foundation Course	UCCATF11	Economics for Management	2	2	2	25	75	100
	Ability Enhancement Course AEC1	UCSSTM11	Soft Skills I	2	2	3	25	75	100
			TOTAL	30	23	-	200	600	800
SEMESTER II									
I	Generic Elective Languages (To choose 1 out of 4)	UCTATL21	Tamil II	6	3	3	25	75	100
		UCURTL21	Urdu II						
		UCARTL21	Arabic II						
		UCHDTL21	Hindi II						
II	English	UCENTL21	English II	4	3	3	25	75	100
III	Core Course 3	UCCATC21	Financial Accounting II	5	4	3	25	75	100
	Core Course 4	UCCATC22	Business Law	5	4	3	25	75	100
	Elective 2	UCCAPA21/ UCCAPA22	Allied: Python Programming and Lab / Programming in C ++ and Lab	4	3	3	25	75	100
IV	Skill Enhancement Course SEC 2	UCCATS21	Consumer welfare	2	2	3	25	75	100
	Skill Enhancement Course SEC 3	UCCATS22	Digital Marketing	2	2	2	25	75	100
	Ability Enhancement Course AEC2	UCSSTM21	Soft Skills II	2	2	3	25	75	100
			TOTAL	30	23	-	200	600	800
SEMESTER III									
I	Generic Elective	UCTATL31	Tamil III	6	3	3	25	75	100

	Languages (To choose 1 out of 4)	UCURTL31	Urdu III						
		UCARTL31	Arabic III						
		UCHDTL31	Hindi III						
II	English	UCENTL31	English III	4	3	3	25	75	100
III	Core Course 5	UCCATC31	Corporate Accounting I	5	4	3	25	75	100
	Core Course 6	UCCATC32	Business Mathematics & Statistics	5	4	3	25	75	100
	Elective 3	UCCAPA31/ UCCAPA32	Allied: Web Technology (PHP) and Lab /Programming in JAVA and Lab	4	4	3	25	75	100
IV	Skill Enhancement Course SEC 4	UCCATS31	Customer Relationship Management with IT	2	1	3	25	75	100
	Skill Enhancement Course SEC 5 [Online Exam]	UCCAOS32	Computerized Management Information System (CMIS)	1	1	2	25	75	100
	EVS	-	Environmental Studies	1	-	-	-	-	-
	Ability Enhancement Course AEC3	UCSSTM31	Soft Skills III	2	2	3	25	75	100
			TOTAL	30	22	-	200	600	800

SEMESTER IV									
I	Generic Elective Languages (To choose 1 out of 4)	UCTATL41	Tamil IV	6	3	3	25	75	100
		UCURTL41	Urdu IV						
		UCARTL41	Arabic IV						
		UCHDTL41	Hindi IV						
II	English	UCENTL41	English I	4	3	3	25	75	100
III	Core Course 7	UCCATC41	Corporate Accounting II	5	4	3	25	75	100
	Core Course 8	UCCATC42	Company Law	5	4	3	25	75	100
	Elective 4	UCCATA41/ UCCATA42	Allied: Introduction to Data Science/Relational Database Management System	3	3	3	25	75	100
IV	Skill Enhancement Course SEC 6	UCCATS41	Enterprise Resource Planning with IT	2	2	3	25	75	100
	Skill Enhancement Course SEC 7	UCCATS42	Computer Applications in Finance	2	2	2	25	75	100
	EVS [Online Exam]	UCESOM41	Environmental Studies	1	2	2	25	75	100
	Ability Enhancement Course AEC4	UCSSTM41	Soft Skills IV	2	2	3	25	75	100
			TOTAL	30	25	-	225	675	900
SEMESTER V									
III	Core Course 9	UCCATC51	Cost Accounting I	5	4	3	25	75	100

	Core Course 10	UCCATC52	Banking Law and Practice	5	4	3	25	75	100
	Core Course 11	UCCATC53	Income Tax Law and Practice I	4	4	3	25	75	100
	Core Course 12	UCCAJC51/ UCCATC54	Project with Viva Voce Auditing /Corporate Governance	4	4	3	25	75	100
	Discipline Specific Elective 5	UCCATE51/ UCCATE52	Indirect Taxation/ Financial Management	4	3	3	25	75	100
	Discipline Specific Elective 6	UCCAPE53/ UCCAPE54	Software Engineering+(UML Lab)/Object oriented Analysis and Design+(UML Lab)	4	3	3	25	75	100
IV	VED [Online Exam]	UCVEOM51	Value Education	2	2	2	25	75	100
	Summer Internship/Industrial Training	UCCAIM51	Internship/Industrial Training	2	2	3	25	75	100
			TOTAL	30	26	-	200	600	800
SEMESTER VI									
III	Core Course 13	UCCATC61	Cost Accounting II	6	4	3	25	75	100
	Core Course 14	UCCATC62	Management Accounting	6	4	3	25	75	100
	Core Course 15	UCCATA63	Income Tax Law and Practice II	6	4	3	25	75	100
	Discipline Specific Elective 7	UCCATE61/ UCCATE62	Entrepreneurial Development/Human Resource management	5	3	3	25	75	100
	Discipline Specific Elective 8	UCCAPE63/ UCCAPE64	Practical Tally /R Language	5	3	3	25	75	100
IV	Professional Competency	UCCAOP61	General Awareness for Competitive Examinations	2	2	3	25	75	100
V	Extension Activity	UCEXAM61	Extension Activity	-	1	-	25	75	100
	SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC [Mandatory Online Course to be eligible for obtaining the UG degree]								
			TOTAL	30	21	-	175	525	700
			Grand Total	180	140	-	1200	3600	4800

**B.Com [Finance & Accounts]
PROGRAMME SPECIFIC OUTCOMES**

PSO1 – Placement:

To prepare the students who will demonstrate respectful engagement with others' ideas, behaviours, and beliefs and apply diverse frames of reference to decisions and actions.

PSO 2 - Entrepreneur:

To create effective entrepreneurs by enhancing their critical thinking, problem-solving, decision making and leadership skill that will facilitate startups and high-potential organizations

PSO3 – Research and Development:

Design and implement HR systems and practices grounded in research that comply with employment laws, leading the organization towards growth and development.

PSO4 – Contribution to Business World:

To produce employable, ethical and innovative professionals to sustain in the dynamic business world.

PSO 5 – Contribution to the Society:

To contribute to the development of society by collaborating with stakeholders for mutual benefit

PSO 6 Provide more exposure to modern aspects of the HR and Marketing field to develop decision-making skills

PSO 7 Equip with knowledge of legal framework in the context of the business, company, and various industries

PSO 8 Understand the importance of communication and writing necessary reports in the daily routine of business

PSO 9 Computer applications and computerized accounting, like e-filing and different tax return training, will enable them to solve accounting problems

PSO 10 Understand the statistical methods and techniques to solve various problems relating to another interdisciplinary arena, including research

MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES

Programme	Program Out Comes (POs)
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Specific Outcomes (PSO)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
PSO1	√	√	√	√		√	√	√		√
PSO2	√	√	√	√	√	√	√		√	√
PSO3	√	√	√	√	√	√	√			
PSO4	√	√	√	√	√	√	√	√		√
PSO5	√	√	√	√	√	√	√		√	√
PSO6	√	√	√	√		√				√
PSO7	√	√	√	√	√	√	√	√	√	√
PSO8	√	√	√	√	√		√	√		√
PSO9	√	√	√	√		√		√	√	√
PSO10	√	√	√	√	√	√			√	√
Correlated -Very High					Total =82					

Mapping Bench Mark

Mapping	1-30%	31-60%	61-70%	71-100%
Matches	1-30	31-60	61-70	71-100
Correlation	Poor	Moderate	High	Very High

COURSE STRUCTURE for B.Com. FINANCE & ACCOUNTS (For the candidates admitted from the academic year 2023-2024)									
Part	Category	Course Code	Course Title	Hrs./Week	Credit	Exam. Hrs.	CIA	ESE	TOTAL
SEMESTER I									
I	Generic Elective Languages (To choose 1 out of 4)	UCTATL11	Tamil I	6	3	3	25	75	100
		UCURTL11	Urdu I						
		UCARTL11	Arabic I						
		UCHDTL11	Hindi I						
II	English	UCENTL11	English I	4	3	3	25	75	100
III	Core Course 1	UCFATC11	Financial Accounting I	5	4	3	25	75	100
	Core Course 2	UCFATC12	Principles of Management	5	4	3	25	75	100
	Elective 1	UCFATA11/ UCFATA12/ UCFATA13	Business Communication/ Indian Economic Development/ Business Economics	4	3	3	25	75	100
	Skill Enhancement Course SEC1	UCFATS11	E-Commerce	2	2	3	25	75	100
IV	Foundation Course	UCFATF11	Financial Markets	2	2	2	25	75	100
	Ability Enhancement Course AEC1	UCSSTM11	Soft Skills I	2	2	3	25	75	100

			TOTAL	30	23	-	200	600	800
SEMESTER II									
I	Generic Elective Languages (To choose 1 out of 4)	UCTATL21	Tamil II	6	3	3	25	75	100
		UCURTL21	Urdu II						
		UCARTL21	Arabic II						
		UCHDTL21	Hindi II						
II	English	UCENTL21	English II	4	3	3	25	75	100
III	Core Course 3	UCFATC21	Financial Accounting II	5	4	3	25	75	100
	Core Course 4	UCFATC22	Business Law	5	4	3	25	75	100
	Elective 2	UCFATA21/ UCFATA22/ UCFATA23	Human Resource Management/ International Trade/ Working Capital Management	4	3	3	25	75	100
IV	Skill Enhancement Course SEC2	UCFATS21	Financial Technology	2	2	3	25	75	100
	Skill Enhancement Course SEC3	UCFATS22	Personal Finance	2	2	3	25	75	100
	Ability Enhancement Course 2	UCSSTM21	Soft Skills II	2	2	3	25	75	100
			TOTAL	30	23	-	200	600	800
SEMESTER III									
I	Generic Elective Languages (To choose 1 out of 4)	UCTATL31	Tamil III	6	3	3	25	75	100
		UCURTL31	Urdu III						
		UCARTL31	Arabic III						
		UCHDTL31	Hindi III						
II	English	UCENTL31	English III	4	3	3	25	75	100
III	Core Course 5	UCFATC31	Corporate Accounting-I	5	4	3	25	75	100
	Core Course 6	UCFATC32	Company Law	4	4	3	25	75	100
	Elective 3	UCFATA31/ UCFATA32/ UCFATA33	Fundamentals of Investment/ Financial Services/ Business Mathematics and Statistics.	5	4	3	25	75	100
IV	Skill Enhancement Course SEC4	UCFATS31	Entrepreneurship Development	2	1	3	25	75	100
	Skill Enhancement Course SEC5 [Online Exam]	UCFAOS32	Business Analytics	1	1	2	25	75	100
	EVS	-	Environmental Studies	1	-	-	-	-	-
	Ability Enhancement Course 3	UCSSTM31	Soft Skills III	2	2	3	25	75	100
			TOTAL	30	22	-	200	600	800
SEMESTER IV									

I	Generic Elective Languages (To choose 1 out of 4)	UCTATL41	Tamil IV	6	3	3	25	75	100
		UCURTL41	Urdu IV						
		UCARTL41	Arabic IV						
		UCHDTL41	Hindi IV						
II	English	UCENTL41	English IV	4	3	3	25	75	100
III	Core Course 7	UCFATC41	Corporate Accounting-II	5	4	3	25	75	100
	Core Course 8	UCFATC42	Principles of Marketing	5	4	3	25	75	100
	Elective 4	UCFATA41/ UCFATA42/ UCFATA43	Management Information System/Financial Derivatives/ Operation Research	3	3	3	25	75	100
IV	Skill Enhancement Course SEC6	UCFATS41	Digital Marketing	2	2	3	25	75	100
	Skill Enhancement Course SEC7	UCFAPS42	E-filing of Returns - Lab	2	2	3	25	75	100
	EVS [Online Exam]	UCESOM41	Environmental Studies	1	2	2	25	75	100
	Ability Enhancement Course 4	UCSSTM41	Soft Skills IV	2	2	3	25	75	100
			TOTAL	30	25	-	225	675	900

SEMESTER V									
III	Core Course 9	UCFATC51	Cost Accounting I	5	4	3	25	75	100
	Core Course 10	UCFATC52	Banking Law and Practice	5	4	3	25	75	100
	Core Course 11	UCFATC53	Income Tax Law and Practice I	4	4	3	25	75	100
	Core Course 12	UCFAJC51/ UCFATC54	Project with Viva Voce/ Auditing and Corporate Governance	5	4	3	25	75	100
	Discipline - Specific Elective 1	UCFATE51/ UCFATE52	Financial Management/ Financials Reporting	4	3	3	25	75	100
	Discipline-Specific Elective 2	UCFATE53/ UCFATE54	Investment Analysis and Portfolio Management/ Merchant Banking	3	3	3	25	75	100
IV	VED [Online exam]	UCVEOM51	Value Education	2	2	2	25	75	100
	Summer Internship/Industrial Training	UCFAIM51	Internship / Industrial Training	2	2	3	25	75	100
			TOTAL	30	26	-	200	600	800
SEMESTER VI									
III	Core Course 13	UCFATC61	Cost Accounting II	6	5	3	25	75	100
	Core Course 14	UCFATC62	Management Accounting	6	5	3	25	75	100
	Core Course 15	UCFATC63	Income Tax Law and Practice II	6	3	3	25	75	100

	Discipline - Specific Elective 3	UCFATE61/ UCFAPE62	Indirect Taxation/Computer Applications in Business -Lab	5	3	3	25	75	100
	Discipline- Specific Elective 4	UCFATE63/ UCFAPE64	Indian Accounting Standard/ Spreadsheet for Business -Lab	5	2	3	25	75	100
IV	Professional Competency [Online Exam]	UCFAOP61	General Awareness for Competitive Examinations	2	2	2	25	75	100
V	Extension Activities	UCEXAM61	Extension Activities	-	1	-	25	75	100
SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC [Mandatory Online Course to be eligible for obtaining the UG degree]									
			TOTAL	30	21	-	175	525	700
			GRAND TOTAL	180	140	-	1200	3600	4800

PROGRAMME OUTCOMES FOR B.SC. PROGRAMMES
[MATHEMATICS, PHYSICS AND CHEMISTRY]

- PO1** Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study.
- PO2** Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information clearly and concisely to different groups.
- PO3** Critical thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, and beliefs based on empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following a scientific approach to knowledge development.
- PO4** Problem-solving: Capacity to extrapolate from what one has learned and apply competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's learning to real-life situations.
- PO5** Analytical reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples; and address opposing viewpoints.
- PO6** Research-related skills: A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating; Ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation.
- PO7** Cooperation/Teamwork: Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group, and act together as a group or a team in the interests of a common cause and work efficiently as a member of a team.
- PO8** Scientific reasoning: Ability to analyse, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective.
- PO9** Reflective thinking: Critical sensibility to lived experiences, with self-awareness and reflexivity of both self and society.
- PO10** Information/digital literacy: Capability to use ICT in a variety of learning situations; demonstrate the ability to access, evaluate, and use a variety of relevant information sources; and use appropriate software for analysis of data.

- PO11** Self-directed learning: Ability to work independently, identify appropriate resources required for a project, and manage a project through to completion.
- PO12** Multicultural competence: Knowledge of the values and beliefs of multiple cultures and a global perspective; and capability to effectively engage in a multicultural society and interact respectfully with diverse groups.
- PO13** Moral and ethical awareness/reasoning: Ability to embrace moral/ethical values in conducting one's life, formulate a position/argument about an ethical issue from multiple perspectives, and use ethical practices in all work. Capable of demonstrating the ability to identify ethical issues related to one's work; avoid unethical behaviour such as fabrication, falsification or misrepresentation of data or committing plagiarism, not adhering to intellectual property rights; appreciating environmental and sustainability issues; and adopting objective, unbiased and truthful actions in all aspects of work.
- PO14** Leadership readiness/qualities: Capability for mapping out the tasks of a team or an organization, setting direction, formulating an inspiring vision, building a team that can help achieve the vision, motivating and inspiring team members to engage with that vision, and using management skills to guide people to the right destination, smoothly and efficiently.
- PO15** Lifelong learning: Ability to acquire knowledge and skills, including „learning how to learn“, that is necessary for participating in learning activities throughout life through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to changing trades and demands of the workplace through knowledge/skill development/reskilling.

B.Sc. MATHEMATICS DEGREE PROGRAMME
By the end of the program, the students will be able to

PSO1	Develop the mathematical ability to think abstractly.
PSO2	Solve skilled problems.
PSO3	Create talents for various types of employment.
PSO4	Equip themselves to appear in competitive examinations.
PSO5	Learn independently and improve self-performance.
PSO6	Develop in-depth knowledge of mathematics, appreciating the connection between theory and its applications.
PSO7	Identify the application of mathematics in other disciplines and society.
PSO8	Demonstrate mathematical modelling ability.

MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES

Programme Specific Outcomes (PSOs)	Programme Outcomes (POs)									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10

PSO1	✓	✓	✓	✓			✓	✓		✓
PSO2	✓	✓	✓	✓			✓	✓	✓	
PSO3	✓		✓	✓	✓		✓	✓		
PSO4	✓	✓		✓	✓			✓	✓	
PSO5	✓		✓	✓		✓	✓	✓	✓	
PSO6		✓	✓	✓	✓		✓	✓	✓	
PSO7		✓	✓	✓				✓	✓	✓
PSO8		✓	✓			✓	✓	✓	✓	✓
Number of Matches = 53, Correlation: High										

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#### Mapping Correlation Benchmark

| Mapping     | 1-29% | 30-59%   | 60-69% | 70-100%   |
|-------------|-------|----------|--------|-----------|
| Matches     | 1-24  | 25-50    | 51-56  | 57-80     |
| Correlation | Poor  | Moderate | High   | Very High |

**COURSE STRUCTURE FOR B.Sc. MATHEMATICS**  
**(For Students admitted from the academic year 2023-2024)**

| Part               | Category                                               | Course Code | Course Title                                 | Hrs./Week | Credit    | Exam. Hrs. | CIA        | ESE        | TOTAL      |
|--------------------|--------------------------------------------------------|-------------|----------------------------------------------|-----------|-----------|------------|------------|------------|------------|
| <b>SEMESTER I</b>  |                                                        |             |                                              |           |           |            |            |            |            |
| <b>I</b>           | Generic Elective Languages<br>(To choose 1 out of 4)   | UCTATL11    | Tamil I                                      | 6         | 3         | 3          | 25         | 75         | 100        |
|                    |                                                        | UCURTL11    | Urdu I                                       |           |           |            |            |            |            |
|                    |                                                        | UCARTL11    | Arabic I                                     |           |           |            |            |            |            |
|                    |                                                        | UCHDTL11    | Hindi I                                      |           |           |            |            |            |            |
| <b>II</b>          | English                                                | UCENTL11    | English I                                    | 4         | 3         | 3          | 25         | 75         | 100        |
| <b>III</b>         | Core Course 1                                          | UCMSTC11    | Algebra & Trigonometry                       | 5         | 4         | 3          | 25         | 75         | 100        |
|                    | Core Course 2                                          | UCMSTC12    | Differential Calculus                        | 5         | 4         | 3          | 25         | 75         | 100        |
|                    | Elective 1                                             | UCMSTA11    | Allied: Numerical Methods with Applications  | 4         | 3         | 3          | 25         | 75         | 100        |
| <b>IV</b>          | Skill Enhancement Course SEC 1<br>[NME - Allied Dept.] | UCMSPS11    | Numerical Methods with Applications Lab      | 2         | 2         | 3          | 25         | 75         | 100        |
|                    | Foundation Course                                      | UCMSTF11    | Bridge Mathematics                           | 2         | 2         | 2          | 25         | 75         | 100        |
|                    | Ability Enhancement Compulsory Course AEC 1            | UCSSTM11    | Soft Skill I                                 | 2         | 2         | 3          | 25         | 75         | 100        |
|                    |                                                        |             | <b>TOTAL</b>                                 | <b>30</b> | <b>23</b> | <b>-</b>   | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER II</b> |                                                        |             |                                              |           |           |            |            |            |            |
| <b>I</b>           | Generic Elective Languages<br>(To choose 1 out of 4)   | UCTATL21    | Tamil II                                     | 6         | 3         | 3          | 25         | 75         | 100        |
|                    |                                                        | UCURTL21    | Urdu II                                      |           |           |            |            |            |            |
|                    |                                                        | UCARTL21    | Arabic II                                    |           |           |            |            |            |            |
|                    |                                                        | UCHDTL21    | Hindi II                                     |           |           |            |            |            |            |
| <b>II</b>          | English                                                | UCENTL21    | English II                                   | 4         | 3         | 3          | 25         | 75         | 100        |
| <b>III</b>         | Core Course 3                                          | UCMSTC21    | Analytical Geometry (Two & Three Dimensions) | 5         | 4         | 3          | 25         | 75         | 100        |
|                    | Core Course 4                                          | UCMSTC22    | Integral Calculus                            | 5         | 4         | 3          | 25         | 75         | 100        |
|                    | Elective 2                                             | UCMSTA21    | Allied: Calculus of Finite Differences       | 4         | 3         | 3          | 25         | 75         | 100        |
| <b>IV</b>          | Skill Enhancement Course SEC 2                         | UCMSPS21    | Problem-Solving Techniques Lab               | 2         | 2         | 3          | 25         | 75         | 100        |
|                    | Skill Enhancement Course SEC 3                         | UCMSPS22    | Computational Mathematics Lab                | 2         | 2         | 2          | 25         | 75         | 100        |
|                    | Ability Enhancement Compulsory Course AEC 2            | UCSSTM21    | Soft Skill II                                | 2         | 2         | 3          | 25         | 75         | 100        |
|                    |                                                        |             | <b>TOTAL</b>                                 | <b>30</b> | <b>23</b> | <b>-</b>   | <b>200</b> | <b>600</b> | <b>800</b> |

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| <b>SEMESTER III</b> |                            |          |           |   |   |   |    |    |     |
|---------------------|----------------------------|----------|-----------|---|---|---|----|----|-----|
| <b>I</b>            | Generic Elective Languages | UCTATL31 | Tamil III | 6 | 3 | 3 | 25 | 75 | 100 |
|                     |                            | UCURTL31 | Urdu III  |   |   |   |    |    |     |



|                    |                                                      |          |                                         |           |           |          |            |            |            |
|--------------------|------------------------------------------------------|----------|-----------------------------------------|-----------|-----------|----------|------------|------------|------------|
|                    | (To choose 1 out of 4)                               | UCARTL31 | Arabic III                              |           |           |          |            |            |            |
|                    |                                                      | UCHDTL31 | Hindi III                               |           |           |          |            |            |            |
| II                 | English                                              | UCENTL31 | English III                             | 4         | 3         | 3        | 25         | 75         | 100        |
| III                | Core Course 5                                        | UCMSTC31 | Vector Calculus and Applications        | 5         | 4         | 3        | 25         | 75         | 100        |
|                    | Core Course 6                                        | UCMSTC32 | Differential Equations and Applications | 5         | 4         | 3        | 25         | 75         | 100        |
|                    | Elective 3                                           | UCMSTA31 | Allied: Mathematical Statistics         | 4         | 4         | 3        | 25         | 75         | 100        |
| IV                 | Skill Enhancement Course SEC 4                       | UCMSPS31 | MS Office - Lab                         | 1         | 1         | 3        | 25         | 75         | 100        |
|                    | Skill Enhancement Course SEC 5                       | UCMSPS32 | Statistics with R Programming - Lab     | 2         | 1         | 3        | 25         | 75         | 100        |
|                    | EVS                                                  | -        | Environmental Studies                   | 1         | -         | -        | -          | -          | -          |
|                    | Ability Enhancement Compulsory Course AEC 3          | UCSSTM31 | Soft Skill III                          | 2         | 2         | 3        | 25         | 75         | 100        |
|                    |                                                      |          | <b>TOTAL</b>                            | <b>30</b> | <b>22</b> | <b>-</b> | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER IV</b> |                                                      |          |                                         |           |           |          |            |            |            |
| I                  | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL41 | Tamil IV                                | 6         | 3         | 3        | 25         | 75         | 100        |
|                    |                                                      | UCURTL41 | Urdu IV                                 |           |           |          |            |            |            |
|                    |                                                      | UCARTL41 | Arabic IV                               |           |           |          |            |            |            |
|                    |                                                      | UCHDTL41 | Hindi IV                                |           |           |          |            |            |            |
| II                 | English                                              | UCENTL41 | English IV                              | 4         | 3         | 3        | 25         | 75         | 100        |
| III                | Core Course 7                                        | UCMSTC41 | Industry Module – Industrial Statistics | 5         | 4         | 3        | 25         | 75         | 100        |
|                    | Core Course 8                                        | UCMSTC42 | Elements of Mathematical Analysis       | 5         | 4         | 3        | 25         | 75         | 100        |
|                    | Elective 4                                           | UCMSTA41 | Allied: Transformation Techniques       | 3         | 3         | 3        | 25         | 75         | 100        |
| IV                 | Skill Enhancement Course SEC 6                       | UCMSTS41 | Introduction to Data Science            | 2         | 2         | 3        | 25         | 75         | 100        |
|                    | Skill Enhancement Course SEC 7                       | UCMSTS42 | Mathematical Computation                | 2         | 2         | 2        | 25         | 75         | 100        |
|                    | EVS [Online Exam]                                    | UCESOM41 | Environmental Studies                   | 1         | 2         | 2        | 25         | 75         | 100        |
|                    | Ability Enhancement Compulsory Course AEC 4          | UCSSTM41 | Soft Skill IV                           | 2         | 2         | 3        | 25         | 75         | 100        |
|                    |                                                      |          | <b>TOTAL</b>                            | <b>30</b> | <b>25</b> | <b>-</b> | <b>225</b> | <b>675</b> | <b>900</b> |

|                   |      |          |                  |   |   |   |    |    |     |
|-------------------|------|----------|------------------|---|---|---|----|----|-----|
| <b>SEMESTER V</b> |      |          |                  |   |   |   |    |    |     |
| III               | Core | UCMSTC51 | Abstract Algebra | 5 | 4 | 3 | 25 | 75 | 100 |

|            |                                                                                                                                           |          |                                                       |            |            |          |            |            |             |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------|------------|------------|----------|------------|------------|-------------|
|            | Course 9                                                                                                                                  |          |                                                       |            |            |          |            |            |             |
|            | Core Course 10                                                                                                                            | UCMSTC52 | Real Analysis                                         | 5          | 4          | 3        | 25         | 75         | 100         |
|            | Core Course 11                                                                                                                            | UCMSTC53 | Mathematical Modelling                                | 4          | 4          | 3        | 25         | 75         | 100         |
|            | Core Course 12                                                                                                                            | UCMSJC51 | Project with Viva Voce                                | 5          | 4          | 3        | 25         | 75         | 100         |
|            | Discipline Specific Elective 1                                                                                                            | UCMSTE51 | Optimization Techniques                               | 4          | 3          | 3        | 25         | 75         | 100         |
|            | Discipline Specific Elective 2                                                                                                            | UCMSPE51 | Introduction to Machine Learning – Theory & Practical | 3          | 3          | 3        | 25         | 75         | 100         |
| <b>IV</b>  | VED [Online Exam]                                                                                                                         | UCVEOM51 | Value Education                                       | 2          | 2          | 2        | 25         | 75         | 100         |
|            | Summer Internship/Industrial Training                                                                                                     | UCMSIM51 | Internship/Industrial Training                        | 2          | 2          | 3        | 25         | 75         | 100         |
|            |                                                                                                                                           |          | <b>TOTAL</b>                                          | <b>30</b>  | <b>26</b>  | <b>-</b> | <b>200</b> | <b>600</b> | <b>800</b>  |
| <b>III</b> | Core Course 13                                                                                                                            | UCMSTC61 | Linear Algebra                                        | 6          | 5          | 3        | 25         | 75         | 100         |
|            | Core Course 14                                                                                                                            | UCMSTC62 | Complex Analysis                                      | 6          | 5          | 3        | 25         | 75         | 100         |
|            | Core Course 15                                                                                                                            | UCMSTC63 | Mechanics                                             | 6          | 3          | 3        | 25         | 75         | 100         |
|            | Discipline Specific Elective 3                                                                                                            | UCMSPE61 | Programming Language C++ with Practical               | 5          | 3          | 3        | 25         | 75         | 100         |
|            | Discipline Specific Elective 4                                                                                                            | UCMSTE62 | Graph Theory and Applications                         | 5          | 2          | 3        | 25         | 75         | 100         |
| <b>IV</b>  | Professional Competency [Online Exam]                                                                                                     | UCMSOP61 | Mathematics for Competitive Examinations              | 2          | 2          | 3        | 25         | 75         | 100         |
| <b>V</b>   | Extension Activity                                                                                                                        | UCEXAM61 | Extension Activity                                    | -          | 1          | -        | 25         | 75         | 100         |
|            | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC [ Mandatory Online Course to be eligible for obtaining the UG degree] |          |                                                       |            |            |          |            |            |             |
|            |                                                                                                                                           |          | <b>TOTAL</b>                                          | <b>30</b>  | <b>21</b>  | <b>-</b> | <b>175</b> | <b>525</b> | <b>700</b>  |
|            |                                                                                                                                           |          | <b>Grand Total</b>                                    | <b>180</b> | <b>140</b> | <b>-</b> |            |            | <b>4800</b> |

**PROGRAMME SPECIFIC OUTCOMES FOR B.Sc. PHYSICS**  
**On the completion of this program, the student will be able to**

PSO1: Explains fundamental principles and concepts in various branches of physics.  
 PSO2: Use the concepts of physics to analyze and solve physical problems.  
 PSO3: Coordinate the physics knowledge through observation.  
 PSO4: Realize, develop an understanding of the impact of physics concepts and carry out Independently in a real-life situation.  
 PSO5: Students will develop proficiency in the acquisition of data using a variety of laboratory Instruments and analyze and interpret using relevant software and computers.  
 PSO6: By performing experiments in the laboratories and interpreting findings to draw logical Conclusions.  
 PSO7: Discover new ideas in physics, synthesize critically and communicate in scientific forums.  
 PSO8: Able to appear for competitive examinations with confidence and pursue continuously Learning through MOOC, ODL and various learning platforms.

#### MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES

| (PSOs)                                          | Programme Outcomes (POs) |     |     |     |     |     |     |     |     |      |
|-------------------------------------------------|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                                                 | PO1                      | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| PSO1                                            | ✓                        | ✓   | ✓   | -   | ✓   | ✓   | ✓   | ✓   | -   | ✓    |
| PSO2                                            | ✓                        | -   | ✓   | -   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO3                                            | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | -   | -   | ✓   | -    |
| PSO4                                            | ✓                        | ✓   | -   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO5                                            | ✓                        | ✓   | ✓   | ✓   | ✓   | -   | ✓   | ✓   | ✓   | ✓    |
| PSO6                                            | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | -   | -   | ✓   | -    |
| PSO7                                            | ✓                        | ✓   | -   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO8                                            | -                        | -   | ✓   | ✓   | -   | ✓   | -   | ✓   | -   | ✓    |
| Number of Matches = 62 , Correlation: Very High |                          |     |     |     |     |     |     |     |     |      |

#### MAPPING CORRELATION BENCHMARK

| Mapping     | 1-29% | 30-59%   | 60-69% | 70-100%   |
|-------------|-------|----------|--------|-----------|
| Matches     | 1-24  | 25-50    | 51-56  | 57-80     |
| Correlation | Poor  | Moderate | High   | Very High |

#### COURSE STRUCTURE FOR B.Sc. PHYSICS

| (For Students admitted from the academic year 2023-2024) |                                                      |             |                                              |            |        |            |     |     |       |
|----------------------------------------------------------|------------------------------------------------------|-------------|----------------------------------------------|------------|--------|------------|-----|-----|-------|
| Part                                                     | Category                                             | Course Code | Course Title                                 | Hrs./ Week | Credit | Exam. Hrs. | CIA | ESE | TOTAL |
| SEMESTER I                                               |                                                      |             |                                              |            |        |            |     |     |       |
| I                                                        | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL11    | Tamil I                                      | 6          | 3      | 3          | 25  | 75  | 100   |
|                                                          |                                                      | UCURTL11    | Urdu I                                       |            |        |            |     |     |       |
|                                                          |                                                      | UCARTL11    | Arabic I                                     |            |        |            |     |     |       |
|                                                          |                                                      | UCHDTL11    | Hindi I                                      |            |        |            |     |     |       |
| II                                                       | English                                              | UCENTL11    | English I                                    | 4          | 3      | 3          | 25  | 75  | 100   |
| III                                                      | Core Course 1                                        | UCPYTC11    | Properties of Matter and Acoustics           | 6          | 4      | 3          | 25  | 75  | 100   |
|                                                          | Core Course 2                                        | UCPYPC12    | Physics Practical I                          | 3          | 3      | 3          | 25  | 75  | 100   |
|                                                          | Elective 1                                           | UCPYTA11    | Allied Chemistry I                           | 4          | 4      | 3          | 25  | 75  | 100   |
| IV                                                       | Skill Enhancement Course SEC1                        | UCPYPS11    | Allied Chemistry Practical I                 | 3          | 2      | 3          | 25  | 75  | 100   |
|                                                          | Foundation Course                                    | UCPYTF11    | Physics for Everyday Life                    | 2          | 2      | 2          | 25  | 75  | 100   |
|                                                          | Ability Enhancement Compulsory Course AEC1           | UCSSTM11    | Soft Skill I                                 | 2          | 2      | 3          | 25  | 75  | 100   |
|                                                          |                                                      |             | TOTAL                                        | 30         | 23     | -          | 200 | 600 | 800   |
| SEMESTER II                                              |                                                      |             |                                              |            |        |            |     |     |       |
| I                                                        | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL21    | Tamil II                                     | 6          | 3      | 3          | 25  | 75  | 100   |
|                                                          |                                                      | UCURTL21    | Urdu II                                      |            |        |            |     |     |       |
|                                                          |                                                      | UCARTL21    | Arabic II                                    |            |        |            |     |     |       |
|                                                          |                                                      | UCHDTL21    | Hindi II                                     |            |        |            |     |     |       |
| II                                                       | English                                              | UCENTL21    | English II                                   | 4          | 3      | 3          | 25  | 75  | 100   |
| III                                                      | Core Course 3                                        | UCPYTC21    | Heat, Thermodynamics and Statistical Physics | 6          | 5      | 3          | 25  | 75  | 100   |
|                                                          | Core Course 4                                        | UCPYPC22    | Physics Practical II                         | 3          | 3      | 3          | 25  | 75  | 100   |
|                                                          | Elective 2                                           | UCPYTA21    | Allied Chemistry II                          | 4          | 3      | 3          | 25  | 75  | 100   |
| IV                                                       | Skill Enhancement Course SEC2                        | UCPYPS21    | Allied Chemistry Practical II                | 3          | 2      | 3          | 25  | 75  | 100   |
|                                                          | Skill Enhancement Course SEC3                        | UCPYTS22    | Physics of Medical Instruments               | 2          | 2      | 2          | 25  | 75  | 100   |
|                                                          | Ability Enhancement Compulsory Course AEC2           | UCSSTM21    | Soft Skill II                                | 2          | 2      | 3          | 25  | 75  | 100   |
|                                                          |                                                      |             | TOTAL                                        | 30         | 23     | -          | 200 | 600 | 800   |
| SEMESTER III                                             |                                                      |             |                                              |            |        |            |     |     |       |
| I                                                        | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL31    | Tamil III                                    | 6          | 3      | 3          | 25  | 75  | 100   |
|                                                          |                                                      | UCURTL31    | Urdu III                                     |            |        |            |     |     |       |
|                                                          |                                                      | UCARTL31    | Arabic III                                   |            |        |            |     |     |       |
|                                                          |                                                      | UCHDTL31    | Hindi III                                    |            |        |            |     |     |       |
| II                                                       | English                                              | UCENTL31    | English III                                  | 4          | 3      | 3          | 25  | 75  | 100   |
| III                                                      | Core                                                 | UCPYTC31    | Mechanics                                    | 5          | 5      | 3          | 25  | 75  | 100   |

|    |                                             |          |                          |           |           |          |            |            |            |
|----|---------------------------------------------|----------|--------------------------|-----------|-----------|----------|------------|------------|------------|
|    | Course 5                                    |          |                          |           |           |          |            |            |            |
|    | Core Course 6                               | UCPYPC31 | Physics Practical III    | 3         | 3         | 3        | 25         | 75         | 100        |
|    | Elective 3                                  | UCPYTA31 | Allied Mathematics I     | 5         | 4         | 3        | 25         | 75         | 100        |
| IV | Skill Enhancement Course SEC4               | UCPYPS31 | Allied Mathematics Lab I | 3         | 1         | 3        | 25         | 75         | 100        |
|    | Skill Enhancement Course SEC5 [Online Exam] | UCPYOS32 | Energy Physics           | 1         | 1         | 2        | 25         | 75         | 100        |
|    | Ability Enhancement Compulsory Course AEC3  | UCSSTM31 | Soft Skill III           | 2         | 2         | 3        | 25         | 75         | 100        |
|    | EVS [Handled by Allied Dept.]               | -        | Environmental Studies    | 1         | -         | -        | -          | -          | -          |
|    |                                             |          | <b>TOTAL</b>             | <b>30</b> | <b>22</b> | <b>-</b> | <b>200</b> | <b>600</b> | <b>800</b> |

| SEMESTER IV |                                                      |          |                                             |           |           |          |            |            |            |
|-------------|------------------------------------------------------|----------|---------------------------------------------|-----------|-----------|----------|------------|------------|------------|
| I           | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL41 | Tamil IV                                    | 6         | 3         | 3        | 25         | 75         | 100        |
|             |                                                      | UCURTL41 | Urdu IV                                     |           |           |          |            |            |            |
|             |                                                      | UCARTL41 | Arabic IV                                   |           |           |          |            |            |            |
|             |                                                      | UCHDTL41 | Hindi IV                                    |           |           |          |            |            |            |
| II          | English                                              | UCENTL41 | English I                                   | 4         | 3         | 3        | 25         | 75         | 100        |
| III         | Core Course 7                                        | UCPYTC41 | Optics and Laser Physics                    | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Core Course 8                                        | UCPYPC42 | Physics Practical IV                        | 3         | 3         | 3        | 25         | 75         | 100        |
|             | Elective 4                                           | UCPYTA41 | Allied Mathematics II                       | 4         | 4         | 3        | 25         | 75         | 100        |
|             | Skill Enhancement Course SEC6                        | UCPYPS41 | Allied Mathematics Lab II                   | 3         | 2         | 3        | 25         | 75         | 100        |
| IV          | Skill Enhancement Course SEC7                        | UCPYTS42 | Home Electrical Installation                | 2         | 2         | 3        | 25         | 75         | 100        |
|             | Ability Enhancement Compulsory Course AEC4           | UCSSTM41 | Soft Skill IV                               | 2         | 2         | 3        | 25         | 75         | 100        |
|             | EVS [Handled By Allied Dept.] [Online Exam]          | UCESOM41 | Environmental Studies                       | 1         | 2         | 2        | 25         | 75         | 100        |
|             |                                                      |          | <b>TOTAL</b>                                | <b>30</b> | <b>25</b> | <b>-</b> | <b>225</b> | <b>675</b> | <b>900</b> |
| SEMESTER V  |                                                      |          |                                             |           |           |          |            |            |            |
| III         | Core Course 9                                        | UCPYTC51 | Electricity, Magnetism and Electromagnetism | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Core Course 10                                       | UCPYTC52 | Atomic and Nuclear Physics                  | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Core Course 11                                       | UCPYJC51 | Project with Viva - Voce                    | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Core Course 12                                       | UCPYPC53 | General Physics Practical V                 | 3         | 4         | 3        | 25         | 75         | 100        |
|             | Discipline Specific Elective 1                       | UCPYPE51 | Electronics Practical I                     | 3         | 3         | 3        | 25         | 75         | 100        |
|             |                                                      | UCPYTE51 | Applied Electronics                         | 5         | 3         | 3        | 25         | 75         | 100        |

|                    |                                                                                                                                           |          |                                             |            |            |          |             |             |             |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------------------------|------------|------------|----------|-------------|-------------|-------------|
| IV                 | VED [Online Exam]                                                                                                                         | UCVEOM51 | Value Education                             | 2          | 2          | 2        | 25          | 75          | 100         |
|                    | Summer Internship/ Industrial Training (30 Hours)                                                                                         | UCPYIM51 | Internship/Industrial Training              | 2          | 2          | 3        | 25          | 75          | 100         |
|                    |                                                                                                                                           |          | <b>TOTAL</b>                                | <b>30</b>  | <b>26</b>  | <b>-</b> | <b>200</b>  | <b>600</b>  | <b>800</b>  |
| <b>SEMESTER VI</b> |                                                                                                                                           |          |                                             |            |            |          |             |             |             |
| III                | Core Course 13                                                                                                                            | UCPYTC61 | Quantum Mechanics                           | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 14                                                                                                                            | UCPYTC62 | Solid State Physics                         | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 15                                                                                                                            | UCPYPC63 | Physics Practical VI                        | 5          | 3          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 2                                                                                                            | UCPYPE61 | Electronics Practical II                    | 5          | 3          | 3        | 25          | 75          | 100         |
|                    |                                                                                                                                           | UCPYTE61 | Digital Electronics and Microprocessor 8085 | 6          | 4          | 3        | 25          | 75          | 100         |
| IV                 | Professional Competency [Online Exam]                                                                                                     | UCPYOP61 | Physics for Competitive Examinations        | 2          | 2          | 3        | 25          | 75          | 100         |
| V                  | Extension Activity                                                                                                                        | UCEXAM61 | Extension Activity                          | -          | 1          | -        | 25          | 75          | 100         |
|                    | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC [ Mandatory Online Course to be eligible for obtaining the UG degree] |          |                                             |            |            |          |             |             |             |
|                    |                                                                                                                                           |          | <b>TOTAL</b>                                | <b>30</b>  | <b>21</b>  | <b>-</b> | <b>200</b>  | <b>600</b>  | <b>700</b>  |
|                    |                                                                                                                                           |          | <b>Grand Total</b>                          | <b>180</b> | <b>140</b> | <b>-</b> | <b>1200</b> | <b>3600</b> | <b>4800</b> |

#### PROGRAMME SPECIFIC OUTCOMES FOR B.Sc. CHEMISTRY

On successful completion of the Bachelor of Physics with Computer Applications programme, the student should be able to:

PSO1: Disciplinary Knowledge:

Understand the fundamental principles, concepts, and physics and computer science theories—also exhibit proficiency in performing experiments in the laboratory.

PSO2: Critical Thinking:

Analyse complex problems, evaluate information, synthesize information, apply theoretical concepts to practical situations, identify assumptions and biases, make informed decisions and communicate effectively

PSO3: Problem Solving:

Employ theoretical concepts and critical reasoning ability with physical, mathematical and technical skills to solve problems, acquire data, analyze their physical significance and explore new design possibilities.

PSO4: Analytical & Scientific Reasoning:

Apply scientific methods, collect and analyse data, test hypotheses, evaluate evidence, apply statistical techniques and use computational models.

PSO5: Research-related skills:

Formulate research questions, conduct literature reviews, design and execute research studies, communicate research findings and collaborate in research projects.

PSO6: Self-directed & Lifelong Learning:

Set learning goals, manage their learning, reflect on their learning, adapt to new contexts, seek out new knowledge, collaborate with others to continuously improve their skills and knowledge through ongoing learning and professional development, and contribute to the growth and development of their field.

### PROGRAMME-SPECIFIC OUTCOMES (PSO)

**ON COMPLETION OF THE B.SC CHEMISTRY PROGRAMME, THE STUDENTS WILL BE ABLE TO:**

|      |                                                                                                                                                                |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO1 | Utilize his knowledge and interest after studying chemistry as a discipline by summarizing the basic facts and concepts learnt from theory and practical work. |
| PSO2 | Apply principles, theories and techniques of the core subjects to another discipline.                                                                          |
| PSO3 | Apply the recent developments in chemistry to the welfare of nature and society.                                                                               |
| PSO4 | Get job opportunities as a chemist by his understanding of industrial process development and its applications.                                                |
| PSO5 | Pursue his higher education in various interdisciplinary subjects connected with technology and research.                                                      |
| PSO6 | Handle chemicals, apparatus and instruments with proper analytical tools.                                                                                      |
| PSO7 | Solve the problems arising out of industrial production and environmental pollution.                                                                           |
| PSO8 | Explore the knowledge of reactions, processes and their applications as an entrepreneur.                                                                       |

### MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES

| Program-Specific | Program Outcomes (POs) |     |     |     |     |     |     |     |     |      |
|------------------|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                  | PO1                    | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |

| Outcomes (PSOs)                                |   |   |   |   |   |   |   |   |   |   |
|------------------------------------------------|---|---|---|---|---|---|---|---|---|---|
| PSO1                                           | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| PSO2                                           | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| PSO3                                           | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |   | ✓ |
| PSO4                                           | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |   |   |
| PSO5                                           | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| PSO6                                           | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |   |   |
| PSO7                                           | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |   | ✓ |
| PSO8                                           | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |   | ✓ |
| Number of matches = 73, Correlation: Very High |   |   |   |   |   |   |   |   |   |   |

### MAPPING CORRELATION BENCHMARK

| Mapping     | 1-30% | 31-60%   | 61-70% | 71-100%   |
|-------------|-------|----------|--------|-----------|
| Matches     | 1-24  | 25-50    | 51-56  | 57-80     |
| Correlation | Poor  | Moderate | High   | Very High |

| COURSE STRUCTURE FOR B.Sc. CHEMISTRY<br>(For Students admitted from the academic year 2023-2024) |                                                      |             |                                                                                         |            |        |            |     |     |       |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------|------------|--------|------------|-----|-----|-------|
| Part                                                                                             | Category                                             | Course Code | Course Title                                                                            | Hrs./ Week | Credit | Exam. Hrs. | CIA | ESE | TOTAL |
| SEMESTER I                                                                                       |                                                      |             |                                                                                         |            |        |            |     |     |       |
| I                                                                                                | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL11    | Tamil I                                                                                 | 6          | 3      | 3          | 25  | 75  | 100   |
|                                                                                                  |                                                      | UCURTL11    | Urdu I                                                                                  |            |        |            |     |     |       |
|                                                                                                  |                                                      | UCARTL11    | Arabic I                                                                                |            |        |            |     |     |       |
|                                                                                                  |                                                      | UCHDTL11    | Hindi I                                                                                 |            |        |            |     |     |       |
| II                                                                                               | English                                              | UCENTL11    | English I                                                                               | 4          | 3      | 3          | 25  | 75  | 100   |
| III                                                                                              | Core Course 1                                        | UCCHTC11    | General Chemistry I                                                                     | 6          | 4      | 3          | 25  | 75  | 100   |
|                                                                                                  | Core Course 2                                        | UCCHPC12    | Practical I - Quantitative Inorganic Estimation (Titrimetry) and Inorganic Preparations | 3          | 3      | 3          | 25  | 75  | 100   |
|                                                                                                  | Elective 1                                           | UCCHTA11    | Allied Physics I                                                                        | 4          | 4      | 3          | 25  | 75  | 100   |
| IV                                                                                               | Skill Enhancement Course SEC1                        | UCCHPS11    | Allied Physics Practical I                                                              | 3          | 2      | 3          | 25  | 75  | 100   |
|                                                                                                  | Foundation Course                                    | UCCHTF11    | Role of Chemistry in daily life                                                         | 2          | 2      | 2          | 25  | 75  | 100   |
|                                                                                                  | Ability Enhancement Compulsory Course AEC1           | UCSSTM11    | Soft Skill I                                                                            | 2          | 2      | 3          | 25  | 75  | 100   |
|                                                                                                  |                                                      |             | TOTAL                                                                                   | 30         | 23     | -          | 200 | 600 | 800   |
| SEMESTER II                                                                                      |                                                      |             |                                                                                         |            |        |            |     |     |       |
| I                                                                                                | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL21    | Tamil II                                                                                | 6          | 3      | 3          | 25  | 75  | 100   |
|                                                                                                  |                                                      | UCURTL21    | Urdu II                                                                                 |            |        |            |     |     |       |



|                     |                                                            |                       |                                                                                     |           |           |          |            |            |            |
|---------------------|------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------|-----------|-----------|----------|------------|------------|------------|
|                     | 4)                                                         | UCARTL21              | Arabic II                                                                           |           |           |          |            |            |            |
|                     |                                                            | UCHDTL21              | Hindi II                                                                            |           |           |          |            |            |            |
| II                  | English                                                    | UCENTL21              | English II                                                                          | 4         | 3         | 3        | 25         | 75         | 100        |
| III                 | Core Course 3                                              | UCCHTC21              | General Chemistry II                                                                | 6         | 5         | 3        | 25         | 75         | 100        |
|                     | Core Course 4                                              | UCCHPC22              | Practical II – Qualitative Organic Analysis and Preparation of Organic Compound     | 3         | 3         | 3        | 25         | 75         | 100        |
|                     | Elective 2                                                 | UCCHTA21              | Allied Physics II                                                                   | 4         | 3         | 3        | 25         | 75         | 100        |
| IV                  | Skill Enhancement Course SEC2                              | UCCHPS21              | Allied Physics Practical II                                                         | 3         | 2         | 3        | 25         | 75         | 100        |
|                     | Skill Enhancement Course SEC3 [Allied Dept.]               | UCCHTS22              | Diary Chemistry                                                                     | 2         | 2         | 2        | 25         | 75         | 100        |
|                     | Ability Enhancement Compulsory Course AEC2                 | UCSSTM21              | Soft Skill II                                                                       | 2         | 2         | 3        | 25         | 75         | 100        |
|                     |                                                            |                       | <b>TOTAL</b>                                                                        | <b>30</b> | <b>23</b> | <b>-</b> | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER III</b> |                                                            |                       |                                                                                     |           |           |          |            |            |            |
| I                   | Generic Elective Languages (To choose 1 out of 4)          | UCTATL31              | Tamil III                                                                           |           |           |          |            |            |            |
|                     |                                                            | UCURTL31              | Urdu III                                                                            |           |           |          |            |            |            |
|                     |                                                            | UCARTL31              | Arabic III                                                                          |           |           |          |            |            |            |
|                     |                                                            | UCHDTL31              | Hindi III                                                                           |           |           |          |            |            |            |
| II                  | English                                                    | UCENTL31              | English III                                                                         | 4         | 3         | 3        | 25         | 75         | 100        |
| III                 | Core Course 5                                              | UCCHTC31              | General Chemistry III                                                               | 5         | 5         | 3        | 25         | 75         | 100        |
|                     | Core Course 6                                              | UCCHPC32              | Practical III – Qualitative Inorganic Analysis                                      | 3         | 3         | 3        | 25         | 75         | 100        |
|                     | Elective 3                                                 | UCCHTA31/<br>UCCHTA32 | Allied Mathematics I/Allied Zoology I                                               | 5         | 4         | 3        | 25         | 75         | 100        |
| IV                  | Skill Enhancement Course SEC4                              | UCCHPS31/<br>UCCHPS32 | Allied Mathematics Practical I /Allied Zoology Practical I                          | 3         | 1         | 3        | 25         | 75         | 100        |
|                     | Skill Enhancement Course SEC5 [Allied Dept.] [Online Exam] | UCCHOS31/<br>UCCHOS32 | To be handled by Mathematics dept. /Pesticide Chemistry (handled by Biotech. dept.) | 1         | 1         | 2        | 25         | 75         | 100        |
|                     | EVS [Major Dept.]                                          | -                     | Environmental Studies                                                               | 1         | -         | -        | -          | -          | -          |
|                     | Ability Enhancement Compulsory Course AEC3                 | UCSSTM31              | Soft Skill III                                                                      | 2         | 2         | 3        | 25         | 75         | 100        |
|                     |                                                            |                       | <b>TOTAL</b>                                                                        | <b>30</b> | <b>22</b> | <b>-</b> | <b>200</b> | <b>600</b> | <b>800</b> |

|  |                            |          |          |   |   |   |    |    |     |
|--|----------------------------|----------|----------|---|---|---|----|----|-----|
|  | Generic Elective Languages | UCTATL41 | Tamil IV | 6 | 3 | 3 | 25 | 75 | 100 |
|--|----------------------------|----------|----------|---|---|---|----|----|-----|

|                    |                                                  |                        |                                                                                   |           |           |          |            |            |            |
|--------------------|--------------------------------------------------|------------------------|-----------------------------------------------------------------------------------|-----------|-----------|----------|------------|------------|------------|
|                    |                                                  | UCURTL41               | Urdu IV                                                                           |           |           |          |            |            |            |
|                    |                                                  | UCARTL41               | Arabic IV                                                                         |           |           |          |            |            |            |
|                    |                                                  | UCHDTL41               | Hindi IV                                                                          |           |           |          |            |            |            |
| II                 | English                                          | UCENTL41               | English I                                                                         | 4         | 3         | 3        | 25         | 75         | 100        |
| III                | Core Course 7                                    | UCCHTC41               | General Chemistry IV                                                              | 5         | 4         | 3        | 25         | 75         | 100        |
|                    | Core Course 8                                    | UCCHPC42               | Practical: Physical Chemistry I                                                   | 3         | 3         | 3        | 25         | 75         | 100        |
|                    | Elective 4                                       | UCCHTA41/<br>UCCHTA42  | Allied Mathematics II/Allied Zoology II                                           | 4         | 4         | 3        | 25         | 75         | 100        |
|                    | Skill Enhancement Course SEC6                    | UCCHPS41/<br>UCCHPS42  | Allied Mathematics Practical II/Allied Zoology Practical II                       | 3         | 2         | 3        | 25         | 75         | 100        |
| IV                 | Skill Enhancement Course SEC7 [Allied Dept.]     | UCCHTS41/<br>UCCHTS42  | To be handled by Mathematics dept. / Forensic Science (handled by Biotech. dept.) | 2         | 2         | 2        | 25         | 75         | 100        |
|                    | EVS [Major Dept.] [Online Exam]                  | UCESOM41               | Environmental Studies                                                             | 1         | 2         | 2        | 25         | 75         | 100        |
|                    | Ability Enhancement Compulsory Course AEC4       | UCSSTM41               | Soft Skill IV                                                                     | 2         | 2         | 3        | 25         | 75         | 100        |
|                    |                                                  |                        | <b>TOTAL</b>                                                                      | <b>30</b> | <b>25</b> | <b>-</b> | <b>225</b> | <b>675</b> | <b>900</b> |
| <b>SEMESTER V</b>  |                                                  |                        |                                                                                   |           |           |          |            |            |            |
| III                | Core Course 9                                    | UCCHTC51               | Organic Chemistry I                                                               | 5         | 4         | 3        | 25         | 75         | 100        |
|                    | Core Course 10                                   | UCCHTC52               | Inorganic Chemistry I                                                             | 5         | 4         | 3        | 25         | 75         | 100        |
|                    | Core Course 11                                   | UCCHTC53               | Physical Chemistry I                                                              | 4         | 4         | 3        | 25         | 75         | 100        |
|                    | Core Course 12                                   | UCCHJC51               | Project with Viva-Voce                                                            | 5         | 4         | 3        | 25         | 75         | 100        |
|                    | Discipline Specific Elective 1                   | UCCHTE51/<br>UCCHTE52  | Industrial Chemistry/Leather Chemistry Entrepreneurial Skills                     | 4         | 3         | 3        | 25         | 75         | 100        |
|                    | Discipline Specific Elective 2                   | UCCHTE53/<br>UCCHTE54  | Pharmaceutical Chemistry/Biochemistry                                             | 3         | 3         | 3        | 25         | 75         | 100        |
| IV                 | VED [Online Course]                              | UCVEOM51               | Value Education                                                                   | 2         | 2         | 2        | 25         | 75         | 100        |
|                    | Summer Internship/Industrial Training (30 Hours) | UCCHIM51               | Internship/Industrial Training                                                    | 2         | 2         | 3        | 25         | 75         | 100        |
|                    |                                                  |                        | <b>TOTAL</b>                                                                      | <b>30</b> | <b>26</b> | <b>-</b> | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER VI</b> |                                                  |                        |                                                                                   |           |           |          |            |            |            |
| III                | Core Course 13                                   | UCCHTC61               | Organic Chemistry II                                                              | 6         | 4         | 3        | 25         | 75         | 100        |
|                    | Core Course 14                                   | UCCHTC62               | Inorganic Chemistry II                                                            | 6         | 4         | 3        | 25         | 75         | 100        |
|                    | Core Course 15                                   | UCCHPC63               | Practical: Gravimetric Analysis                                                   | 5         | 3         | 3        | 25         | 75         | 100        |
|                    | Discipline-Specific Elective 3                   | UCCHTE61 /<br>UCCHTE62 | Physical Chemistry II / Nanoscience                                               | 6         | 4         | 3        | 25         | 75         | 100        |
|                    | Discipline-Specific Elective 4                   | UCCHTE63 /<br>UCCHTE64 | Fundamentals of Spectroscopy/ Polymer Science                                     | 5         | 3         | 3        | 25         | 75         | 100        |

|           |                                                                                                                                           |          |                                                |            |            |          |            |            |             |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------|------------|------------|----------|------------|------------|-------------|
| <b>IV</b> | Professional Competency [Online Exam]                                                                                                     | UCCHOP61 | General Awareness for Competitive Examinations | 2          | 2          | 2        | 25         | 75         | 100         |
| <b>V</b>  | Extension Activity                                                                                                                        | UCEXAM61 | Extension Activity                             | -          | 1          | -        | 25         | 75         | 100         |
|           | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC [ Mandatory Online Course to be eligible for obtaining the UG degree] |          |                                                |            |            |          |            |            |             |
|           |                                                                                                                                           |          | <b>TOTAL</b>                                   | <b>30</b>  | <b>21</b>  | <b>-</b> | <b>175</b> | <b>525</b> | <b>700</b>  |
|           |                                                                                                                                           |          | <b>Grand Total</b>                             | <b>180</b> | <b>140</b> | <b>-</b> |            |            | <b>4800</b> |

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**PROGRAMME OUTCOMES FOR B.Sc. BIOCHEMISTRY & BIOTECHNOLOGY**  
**PROGRAMME OUTCOMES:**

PO1: Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate Programme of study

PO2: Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express oneself; demonstrate the ability to listen carefully, read and write analytically, and present complex information clearly and concisely to different groups.

PO3: Critical thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, and beliefs based on empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following a scientific approach to knowledge development.

PO4: Problem-solving: Capacity to extrapolate from what one has learned and apply competencies to solve different non-familiar problems rather than replicate curriculum content knowledge and apply one's learning to real-life situations.

PO5: Analytical reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from various sources; draw valid conclusions and support them with evidence and examples; and address opposing viewpoints.

PO6: Research-related skills: A sense of inquiry and capability for asking relevant/appropriate questions, problem arising, synthesising and articulating; Ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation

PO7: Cooperation/Teamwork: Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group and act together as a group or a team in the interests of a common cause and work efficiently as a member of a team

PO8: Scientific reasoning: Ability to analyse, interpret and draw conclusions from quantitative/qualitative data and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective.

PO9: Reflective thinking: Critical sensibility to lived experiences, self-awareness, and reflexivity of self and society.

PO10 Information/digital literacy: Capability to use ICT in a variety of learning situations;

demonstrate ability to access, evaluate, and use a variety of relevant information sources; and use appropriate software for analysis of data.

### PROGRAMME SPECIFIC OUT COMESFOR B.Sc. BIOCHEMISTRY

#### PROGRAMME-SPECIFIC OUTCOMES FOR B.Sc. BIOCHEMISTRY ON THE COMPLETION OF THIS PROGRAM, THE STUDENT WILL BE ABLE TO

PSO1-Comprehend the knowledge in the biochemical, analytical, biostatistical and computational areas.  
 PSO2- Understand the fundamental biochemical principles, such as the structure-function relationship of Biomolecules/metabolic pathways with their clinical correlation.  
 PSO3- Demonstrate an understanding of the principle and have practical experience with the analytical techniques in life science.  
 PSO4- Analyse biochemical data (e.g., enzyme kinetics, molecular structure analysis and biological databases) and use software and ICT tools.  
 PSO5- Explain the biochemical process that underlines the relationship between phenotype and genotype, the structural organization of genetic material, their experience and control.  
 PSO6- Acquire lifelong self-learning habits through online courses and the ability to plan and manage projects to achieve objectives.  
 PSO7- Develop ethical and moral values in the profession, environmental and social responsibilities, and multi-level commitment to health and well-being.  
 PSO8- Appreciate and execute their professional roles in society as biochemistry professionals, employers and employees in various industries, researchers and educators.

#### MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES FOR B.Sc. BIOCHEMISTRY

|      | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| PSO1 | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     | ✓   |     | ✓    |
| PSO2 | ✓   | ✓   |     |     |     | ✓   |     | ✓   |     |      |
| PSO3 | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     | ✓   |     |      |
| PSO4 | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     | ✓   |     | ✓    |
| PSO5 | ✓   | ✓   | ✓   | ✓   |     | ✓   |     | ✓   |     |      |
| PSO6 |     | ✓   | ✓   | ✓   |     | ✓   |     | ✓   | ✓   | ✓    |
| PSO7 |     |     | ✓   |     |     | ✓   | ✓   | ✓   | ✓   |      |
| PSO8 |     |     |     | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |      |

|             |          |
|-------------|----------|
| Mapping     | 61 – 70% |
| Matches     | 51       |
| Correlation | High     |

#### Mapping Correlation Benchmark

| Mapping     | 1-30% | 31-60%   | 61-70% | 71-100%   |
|-------------|-------|----------|--------|-----------|
| Matches     | 1-24  | 25-50    | 51-56  | 57-80     |
| Correlation | Poor  | Moderate | High   | Very High |

#### COURSE STRUCTURE FOR B.Sc. BIOCHEMISTRY (For Students admitted from the academic year 2023-2024)

| Part                | Category                                             | Course Code | Course Title                     | Hrs./ Week | Credit    | Exam- Hrs. | CIA        | ESE        | TOTAL      |
|---------------------|------------------------------------------------------|-------------|----------------------------------|------------|-----------|------------|------------|------------|------------|
| <b>SEMESTRE I</b>   |                                                      |             |                                  |            |           |            |            |            |            |
| I                   | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL11    | Tamil I                          | 6          | 3         | 3          | 25         | 75         | 100        |
|                     |                                                      | UCURTL11    | Urdu I                           |            |           |            |            |            |            |
|                     |                                                      | UCARTL11    | Arabic I                         |            |           |            |            |            |            |
|                     |                                                      | UCHDTL11    | Hindi I                          |            |           |            |            |            |            |
| II                  | English                                              | UCENTL11    | English I                        | 4          | 3         | 3          | 25         | 75         | 100        |
| III                 | Core Course 1                                        | UCBITC11    | Nutrition Biochemistry           | 6          | 4         | 3          | 25         | 75         | 100        |
|                     | Core Course 2                                        | UCBIPC12    | Nutrition Biochemistry Practical | 3          | 3         | 3          | 25         | 75         | 100        |
|                     | Elective 1                                           | UCBITA11    | Allied Chemistry I               | 4          | 4         | 3          | 25         | 75         | 100        |
| IV                  | Skill Enhancement Course SEC1                        | UCBIPS11    | Allied Chemistry Practical I     | 3          | 2         | 3          | 25         | 75         | 100        |
|                     | Foundation Course                                    | UCBITF11    | Basics in Biochemistry           | 2          | 2         | 2          | 25         | 75         | 100        |
|                     | Ability Enhancement Compulsory Course AEC1           | UCSSTM11    | Soft Skill I                     | 2          | 2         | 3          | 25         | 75         | 100        |
|                     |                                                      |             | <b>TOTAL</b>                     | <b>30</b>  | <b>23</b> | <b>-</b>   | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER II</b>  |                                                      |             |                                  |            |           |            |            |            |            |
| I                   | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL21    | Tamil II                         | 6          | 3         | 3          | 25         | 75         | 100        |
|                     |                                                      | UCURTL21    | Urdu II                          |            |           |            |            |            |            |
|                     |                                                      | UCARTL21    | Arabic II                        |            |           |            |            |            |            |
|                     |                                                      | UCHDTL21    | Hindi II                         |            |           |            |            |            |            |
| II                  | English                                              | UCENTL21    | English II                       | 4          | 3         | 3          | 25         | 75         | 100        |
| III                 | Core Course 3                                        | UCBITC21    | Cell Biology                     | 6          | 5         | 3          | 25         | 75         | 100        |
|                     | Core Course 4                                        | UCBIPC22    | Cell Biology Practical           | 3          | 3         | 3          | 25         | 75         | 100        |
|                     | Elective 2                                           | UCBITA21    | Allied Chemistry II              | 4          | 3         | 3          | 25         | 75         | 100        |
| IV                  | Skill Enhancement Course SEC2                        | UCBIPS21    | Allied Chemistry Practical II    | 3          | 2         | 3          | 25         | 75         | 100        |
|                     | Skill Enhancement Course SEC3 [Allied Dept.]         | UCBITS22    | Health and Nutrition             | 2          | 2         | 2          | 25         | 75         | 100        |
|                     | Ability Enhancement Compulsory Course AEC2           | UCSSTM21    | Soft Skill II                    | 2          | 2         | 3          | 25         | 75         | 100        |
|                     |                                                      |             | <b>TOTAL</b>                     | <b>30</b>  | <b>23</b> | <b>-</b>   | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER III</b> |                                                      |             |                                  |            |           |            |            |            |            |
| I                   | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL31    | Tamil III                        | 6          | 3         | 3          | 25         | 75         | 100        |
|                     |                                                      | UCURTL31    | Urdu III                         |            |           |            |            |            |            |
|                     |                                                      | UCARTL31    | Arabic III                       |            |           |            |            |            |            |
|                     |                                                      | UCHDTL31    | Hindi III                        |            |           |            |            |            |            |
| II                  | English                                              | UCENTL31    | English III                      | 4          | 3         | 3          | 25         | 75         | 100        |
| III                 | Core Course 5                                        | UCBITC31    | Biomolecules                     | 5          | 4         | 3          | 25         | 75         | 100        |
|                     | Core Course 6                                        | UCBIPC32    | Biomolecules Practical           | 3          | 3         | 3          | 25         | 75         | 100        |
|                     | Elective 3                                           | UCBITA31    | Allied Zoology I                 | 5          | 4         | 3          | 25         | 75         | 100        |
| IV                  | Skill Enhancement Course SEC4                        | UCBIPS31    | Allied Zoology Practical I       | 3          | 1         | 3          | 25         | 75         | 100        |

|  |                                                            |          |                       |           |           |          |            |            |            |
|--|------------------------------------------------------------|----------|-----------------------|-----------|-----------|----------|------------|------------|------------|
|  | Skill Enhancement Course SEC5 [Allied Dept.] [Online Exam] | UCBIO32  | Tissue Culture        | 1         | 1         | 2        | 25         | 75         | 100        |
|  | EVS [Major Dept.]                                          | -        | Environmental Studies | 1         | -         | -        | -          | -          | -          |
|  | Ability Enhancement Compulsory Course AEC3                 | UCSSTM31 | Soft Skill III        | 2         | 2         | 3        | 25         | 75         | 100        |
|  |                                                            |          | <b>TOTAL</b>          | <b>30</b> | <b>22</b> | <b>-</b> | <b>200</b> | <b>600</b> | <b>800</b> |

| SEMESTER IV |                                                   |                        |                                                             |           |           |          |            |            |            |
|-------------|---------------------------------------------------|------------------------|-------------------------------------------------------------|-----------|-----------|----------|------------|------------|------------|
| I           | Generic Elective Languages (To choose 1 out of 4) | UCTATL41               | Tamil IV                                                    | 6         | 3         | 3        | 25         | 75         | 100        |
|             |                                                   | UCURTL41               | Urdu IV                                                     |           |           |          |            |            |            |
|             |                                                   | UCARTL41               | Arabic IV                                                   |           |           |          |            |            |            |
|             |                                                   | UCHDTL41               | Hindi IV                                                    |           |           |          |            |            |            |
| II          | English                                           | UCENTL41               | English I                                                   | 4         | 3         | 3        | 25         | 75         | 100        |
| III         | Core Course 7                                     | UCBITC41               | Biochemical Techniques                                      | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Core Course 8                                     | UCBIPC42               | Biochemical Techniques Practical                            | 3         | 3         | 3        | 25         | 75         | 100        |
|             | Elective 4                                        | UCBITA41               | Allied Zoology II                                           | 4         | 4         | 3        | 25         | 75         | 100        |
| IV          | Skill Enhancement Course SEC6                     | UCBIPS41               | Allied Zoology Practical II                                 | 3         | 2         | 3        | 25         | 75         | 100        |
|             | Skill Enhancement Course SEC7 [Allied Dept.]      | UCBITS42               | Medical Coding                                              | 2         | 2         | 2        | 25         | 75         | 100        |
|             | EVS [Major Dept.] [Online Exam]                   | UCESOM41               | Environmental Studies                                       | 1         | 2         | 2        | 25         | 75         | 100        |
|             | Ability Enhancement Compulsory Course AEC4        | UCSSTM41               | Soft Skill IV                                               | 2         | 2         | 3        | 25         | 75         | 100        |
|             |                                                   |                        | <b>TOTAL</b>                                                | <b>30</b> | <b>25</b> | <b>-</b> | <b>225</b> | <b>675</b> | <b>900</b> |
| SEMESTRE V  |                                                   |                        |                                                             |           |           |          |            |            |            |
| III         | Core Course 9                                     | UCBITC51               | Enzymes                                                     | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Core Course 10                                    | UCBITC52               | Clinical Biochemistry                                       | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Core Course 11                                    | UCBIPC53               | Clinical Biochemistry Practical                             | 4         | 3         | 3        | 25         | 75         | 100        |
|             | Core Course 12                                    | UCBIJC51               | Project with Viva-voce                                      | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Discipline Specific Elective 1                    | UCBITE51/<br>UCBITE52/ | Immunology/Biochemical Pharmacology                         | 4         | 4         | 3        | 25         | 75         | 100        |
|             | Discipline Specific Elective 2                    | UCBITE53/<br>UCBITE54  | Plant Biochemistry & Plant Therapeutic/Research Methodology | 3         | 3         | 3        | 25         | 75         | 100        |
| IV          | VED [Online Exam]                                 | UCVEOM51               | Value Education                                             | 2         | 2         | 3        | 25         | 75         | 100        |
|             | Summer Internship/Industrial Training (30 Hours)  | UCBIIM51               | Internship/Industrial Training                              | 2         | 2         | 3        | 25         | 75         | 100        |

|                    |                                                                                                                                           |                        |                                                |            |            |          |             |             |             |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------|------------|------------|----------|-------------|-------------|-------------|
|                    |                                                                                                                                           |                        | <b>TOTAL</b>                                   | <b>30</b>  | <b>26</b>  | <b>-</b> | <b>200</b>  | <b>600</b>  | <b>800</b>  |
| <b>SEMESTRE VI</b> |                                                                                                                                           |                        |                                                |            |            |          |             |             |             |
| <b>III</b>         | Core Course 13                                                                                                                            | UCBITC61               | Molecular Biology                              | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 14                                                                                                                            | UCBITC62               | Human Physiology                               | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 15                                                                                                                            | UCBITC63               | Intermediary Metabolism                        | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 3                                                                                                            | UCBITE61/<br>UCBITE62/ | Biotechnology/<br>Bioinformatics               | 5          | 3          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 4                                                                                                            | UCBITE63/<br>UCBITE64  | Bioentrepreneurship/Basics of Forensic Science | 5          | 3          | 3        | 25          | 75          | 100         |
| <b>IV</b>          | Professional Competency                                                                                                                   | UCBIOP61               | General Awareness for Competitive Examinations | 2          | 2          | 3        | 25          | 75          | 100         |
| <b>V</b>           | Extension Activity                                                                                                                        | UCEXAM61               | Extension Activity                             | -          | 1          | -        | 25          | 75          | 100         |
|                    | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC [Mandatory Online Course to be eligible for obtaining the UG degree]. |                        |                                                |            |            |          |             |             |             |
|                    |                                                                                                                                           |                        | <b>TOTAL</b>                                   | <b>30</b>  | <b>21</b>  | <b>-</b> | <b>175</b>  | <b>525</b>  | <b>700</b>  |
|                    |                                                                                                                                           |                        | <b>Grand Total</b>                             | <b>180</b> | <b>140</b> | <b>-</b> | <b>1200</b> | <b>3600</b> | <b>4800</b> |

### Programme Specific Outcomes FOR B.Sc. BIOTECHNOLOGY



**Upon completion of the B.Sc. Biotechnology Programme, the students will be able to:**

PSO1: Acquire sound and solid base in local as well as national languages and on the fundamental principles and the scientific theories related to various spheres of Biotechnology with technological applications.

PSO2: Apply biotechnology skills with global competencies in core and allied fields.

PSO3: Integrate technologies through inter-disciplinary concepts and suggest better solutions to solve issues of the underprivileged.

PSO4: Utilize ICT for learning and experimenting to pursue modern technology and concepts.

PSO5: Developing various communication skills, such as reading, listening, speaking, etc., helps to express ideas clearly and effectively.

PSO6: Conceive the concepts and research approaches to pursue higher studies/attain a higher career in industry, medicine and other relevant fields of biotechnology both locally and nationally and develop their scientific tempo.

PSO7: Become entrepreneurs and technologists with strong ethics and technical skills.

PSO8: Find the bio-solutions for cross-cutting issues in a global, economic, environmental, and societal context.

**MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH  
PROGRAMME OUTCOMES**

| Programme Specific Outcomes (PSOs)        | Programme Outcomes (PO) |     |     |     |     |     |     |     |     |      |
|-------------------------------------------|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                                           | PO1                     | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| PSO1                                      | √                       | √   | √   | √   |     |     | √   |     |     |      |
| PSO2                                      | √                       | √   | √   |     | √   | √   | √   | √   |     |      |
| PSO3                                      | √                       | √   | √   | √   | √   | √   |     | √   | √   | √    |
| PSO4                                      | √                       |     | √   |     | √   | √   |     |     | √   |      |
| PSO5                                      | √                       | √   |     |     |     | √   |     |     | √   |      |
| PSO6                                      | √                       | √   | √   | √   | √   | √   | √   | √   | √   | √    |
| PSO7                                      |                         | √   | √   | √   |     |     |     |     |     | √    |
| PSO8                                      | √                       | √   |     | √   | √   |     | √   | √   |     | √    |
| Number of matches = 51, Correlation: High |                         |     |     |     |     |     |     |     |     |      |

**MAPPING CORRELATION BENCHMARK**

| Mapping     | 1-25% | 26-50%   | 51-75% | 76-100%   |
|-------------|-------|----------|--------|-----------|
| Matches     | 1-20  | 21-40    | 41-60  | 61-80     |
| Correlation | Poor  | Moderate | High   | Very High |

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**COURSE STRUCTURE FOR B.Sc. BIOTECHNOLOGY  
(For Students admitted from the academic year 2023-2024)**

| Part                | Category                                             | Course Code | Course Title                                          | Hrs./<br>Week | Credit    | Exam. Hrs. | CIA        | ESE        | TOTAL      |
|---------------------|------------------------------------------------------|-------------|-------------------------------------------------------|---------------|-----------|------------|------------|------------|------------|
| <b>SEMESTER I</b>   |                                                      |             |                                                       |               |           |            |            |            |            |
| I                   | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL11    | Tamil I                                               | 6             | 3         | 3          | 25         | 75         | 100        |
|                     |                                                      | UCURTL11    | Urdu I                                                |               |           |            |            |            |            |
|                     |                                                      | UCARTL11    | Arabic I                                              |               |           |            |            |            |            |
|                     |                                                      | UCHDTL11    | Hindi I                                               |               |           |            |            |            |            |
| II                  | English                                              | UCENTL11    | English I                                             | 4             | 3         | 3          | 25         | 75         | 100        |
| III                 | Core Course 1                                        | UCBTTC11    | Cell and Molecular Development Biology                | 6             | 4         | 3          | 25         | 75         | 100        |
|                     | Core Course 2                                        | UCBTPC12    | Practical I: Cell and Molecular Development Biology - | 3             | 3         | 3          | 25         | 75         | 100        |
|                     | Elective 1                                           | UCBTTA11    | Allied –Biological Chemistry                          | 4             | 4         | 3          | 25         | 75         | 100        |
| IV                  | Skill Enhancement Course SEC1                        | UCBTPS11    | Allied Practical I - Biological Chemistry             | 3             | 2         | 3          | 25         | 75         | 100        |
|                     | Skill Enhancement Course I [Allied Dept.]            | UCBTTF11    | Basics of Biotechnology                               | 2             | 2         | 2          | 25         | 75         | 100        |
|                     | Ability Enhancement Compulsory Course [Eng. Dept.]   | UCSSTM11    | Soft Skill I                                          | 2             | 2         | 3          | 25         | 75         | 100        |
|                     |                                                      |             | <b>TOTAL</b>                                          | <b>30</b>     | <b>23</b> | <b>-</b>   | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER II</b>  |                                                      |             |                                                       |               |           |            |            |            |            |
| I                   | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL21    | Tamil II                                              | 6             | 3         | 3          | 25         | 75         | 100        |
|                     |                                                      | UCURTL21    | Urdu II                                               |               |           |            |            |            |            |
|                     |                                                      | UCARTL21    | Arabic II                                             |               |           |            |            |            |            |
|                     |                                                      | UCHDTL21    | Hindi II                                              |               |           |            |            |            |            |
| II                  | English                                              | UCENTL21    | English II                                            | 4             | 3         | 3          | 25         | 75         | 100        |
| III                 | Core Course 3                                        | UCBTTC21    | Genetics                                              | 6             | 5         | 3          | 25         | 75         | 100        |
|                     | Core Course 4                                        | UCBTPC22    | Practical II: Genetics                                | 3             | 3         | 3          | 25         | 75         | 100        |
|                     | Elective 2                                           | UCBTTA21    | Allied - Fundamental of Microbiology                  | 4             | 3         | 3          | 25         | 75         | 100        |
| IV                  | Skill Enhancement Course SEC2                        | UCBTPS21    | Allied Practical II - Fundamental of Microbiology     | 3             | 2         | 3          | 25         | 75         | 100        |
|                     | Skill Enhancement Course SEC3 [Allied Dept.]         | UCBTTS22    | Vermitechnology                                       | 2             | 2         | 2          | 25         | 75         | 100        |
|                     | Ability Enhancement Compulsory Course [Eng. Dept.]   | UCSSTM21    | Soft Skill II                                         | 2             | 2         | 3          | 25         | 75         | 100        |
|                     |                                                      |             | <b>TOTAL</b>                                          | <b>30</b>     | <b>23</b> | <b>-</b>   | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER III</b> |                                                      |             |                                                       |               |           |            |            |            |            |
|                     | Generic Elective                                     | UCTATL31    | Tamil III                                             | 6             | 3         | 3          | 25         | 75         | 100        |

|     |                                                            |          |                                                   |           |           |          |            |            |            |
|-----|------------------------------------------------------------|----------|---------------------------------------------------|-----------|-----------|----------|------------|------------|------------|
| I   | Languages<br>(To choose 1 out of 4)                        | UCURL31  | Urdu III                                          |           |           |          |            |            |            |
|     |                                                            | UCARTL31 | Arabic III                                        |           |           |          |            |            |            |
|     |                                                            | UCHDTL31 | Hindi III                                         |           |           |          |            |            |            |
| II  | English                                                    | UCENTL31 | English III                                       | 4         | 3         | 3        | 25         | 75         | 100        |
| III | Core Course 5                                              | UCBTTC31 | Immunology and Immunotechnology                   | 5         | 5         | 3        | 25         | 75         | 100        |
|     | Core Course 6                                              | UCBTPC32 | Practical III - Immunology and Immunotechnology - | 3         | 3         | 3        | 25         | 75         | 100        |
|     | Elective 3                                                 | UCBTTA31 | Allied - Bioinstrumentation                       | 5         | 4         | 3        | 25         | 75         | 100        |
| IV  | Skill Enhancement Course SEC4                              | UCBTPS31 | Allied Practical III - Bioinstrumentation         | 3         | 1         | 3        | 25         | 75         | 100        |
|     | Skill Enhancement Course SEC5 [Allied Dept.] [Online Exam] | UCBTOS32 | Mushroom Cultivation                              | 1         | 1         | 2        | 25         | 75         | 100        |
|     | EVS [ Main Dept.]                                          | -        | Environmental Studies                             | 1         | -         | -        | -          | -          | -          |
|     | Ability Enhancement Compulsory Course [Eng. Dept.]         | UCSSTM31 | Soft Skill III                                    | 2         | 2         | 3        | 25         | 75         | 100        |
|     |                                                            |          | <b>TOTAL</b>                                      | <b>30</b> | <b>22</b> | <b>-</b> | <b>200</b> | <b>600</b> | <b>800</b> |

| SEMESTER IV |                                                      |          |                                                        |   |   |   |    |    |     |
|-------------|------------------------------------------------------|----------|--------------------------------------------------------|---|---|---|----|----|-----|
| I           | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL41 | Tamil IV                                               | 6 | 3 | 3 | 25 | 75 | 100 |
|             |                                                      | UCURL41  | Urdu IV                                                |   |   |   |    |    |     |
|             |                                                      | UCARTL41 | Arabic IV                                              |   |   |   |    |    |     |
|             |                                                      | UCHDTL41 | Hindi IV                                               |   |   |   |    |    |     |
| II          | English                                              | UCENTL41 | English IV                                             | 4 | 3 | 3 | 25 | 75 | 100 |
| III         | Core Course 7                                        | UCBTTC41 | Genetic Engineering and rDNA Technology                | 5 | 4 | 3 | 25 | 75 | 100 |
|             | Core Course 8                                        | UCBTPC42 | Practical IV: Genetic Engineering and rDNA Technology  | 3 | 3 | 3 | 25 | 75 | 100 |
|             | Elective 4                                           | UCBTTA41 | Allied – Bioinformatics and Biostatistics              | 4 | 4 | 3 | 25 | 75 | 100 |
| IV          | Skill Enhancement Course SEC6                        | UCBTPS41 | Allied Practical IV – Bioinformatics and Biostatistics | 3 | 2 | 3 | 25 | 75 | 100 |
|             | Skill Enhancement Course SEC7 [ Allied Dept.]        | UCBTTS42 | Organic Farming & Health Management                    | 2 | 2 | 2 | 25 | 75 | 100 |
|             | EVS [ Main Dept.] [Online Exam]                      | UCESOM41 | Environmental Studies                                  | 1 | 2 | 2 | 25 | 75 | 100 |
|             | Ability                                              | UCSSTM41 | Soft Skill IV                                          | 2 | 2 | 3 | 25 | 75 | 100 |

|                    |                                                                                                                                           |                        |                                                                                                       |            |            |          |             |             |             |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------|------------|------------|----------|-------------|-------------|-------------|
|                    | Enhancement Compulsory Course [Eng. Dept.]                                                                                                |                        |                                                                                                       |            |            |          |             |             |             |
|                    |                                                                                                                                           |                        | <b>TOTAL</b>                                                                                          | <b>30</b>  | <b>25</b>  | <b>-</b> | <b>225</b>  | <b>675</b>  | <b>900</b>  |
| <b>SEMESTER V</b>  |                                                                                                                                           |                        |                                                                                                       |            |            |          |             |             |             |
| <b>III</b>         | Core Course 9                                                                                                                             | UCBTTC51               | Plant Biotechnology                                                                                   | 5          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 10                                                                                                                            | UCBTTC52               | Animal Biotechnology                                                                                  | 5          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 11                                                                                                                            | UCBTJC51               | Project With Viva-voce                                                                                | 5          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 12                                                                                                                            | UCBTTC51               | Practical V: Plant Biotechnology, Animal Biotechnology and Environmental and Industrial Biotechnology | 4          | 3          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 1                                                                                                            | UCBTTE51/<br>UCBTTE52/ | Nano Biotechnology/<br>Enzymology                                                                     | 4          | 4          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 2                                                                                                            | UCBTTE53/<br>UCBTTE54/ | Bioethics and Biosafety/<br>Cancer Biology                                                            | 3          | 3          | 3        | 25          | 75          | 100         |
| <b>IV</b>          | VED [Online Exam]                                                                                                                         | UCVEOM51               | Value Education                                                                                       | 2          | 2          | 2        | 25          | 75          | 100         |
|                    | Summer Internship/Industrial Training (30 Hours)                                                                                          | UCBTIM51               | Internship/Industrial Training                                                                        | 2          | 2          | 3        | 25          | 75          | 100         |
|                    |                                                                                                                                           |                        | <b>TOTAL</b>                                                                                          | <b>30</b>  | <b>26</b>  | <b>-</b> | <b>200</b>  | <b>600</b>  | <b>800</b>  |
| <b>SEMESTER VI</b> |                                                                                                                                           |                        |                                                                                                       |            |            |          |             |             |             |
| <b>III</b>         | Core Course 13                                                                                                                            | UCBTTC61               | Bioentrepreneurship                                                                                   | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 14                                                                                                                            | UCBTTC62               | Pharmaceutical Biotechnology                                                                          | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 15                                                                                                                            | UCBTTC63               | Environmental and Industrial Biotechnology                                                            | 5          | 4          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 3                                                                                                            | UCBTTE61/<br>UCBTTE62/ | Marine Biotechnology/<br>Food Technology                                                              | 5          | 3          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 4                                                                                                            | UCBTTE63/<br>UCBTTE64  | Forensic Science/<br>Good Laboratory Practices                                                        | 5          | 3          | 3        | 25          | 75          | 100         |
| <b>IV</b>          | Professional Competency [Online Exam]                                                                                                     | UCBTOP61               | General Awareness for Competitive Examinations                                                        | 2          | 2          | 2        | 25          | 75          | 100         |
| <b>V</b>           | Extension Activity                                                                                                                        | UCEXAM61               | Extension Activity                                                                                    | -          | 1          | -        | 25          | 75          | 100         |
|                    | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC [ Mandatory Online Course to be eligible for obtaining the UG degree] |                        |                                                                                                       |            |            |          |             |             |             |
|                    |                                                                                                                                           |                        | <b>TOTAL</b>                                                                                          | <b>30</b>  | <b>21</b>  | <b>-</b> | <b>175</b>  | <b>525</b>  | <b>700</b>  |
|                    |                                                                                                                                           |                        | <b>Grand Total</b>                                                                                    | <b>180</b> | <b>140</b> | <b>-</b> | <b>1200</b> | <b>3600</b> | <b>4800</b> |

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**PROGRAMME OUTCOMES (POs) for B.Sc. (COMPUTER SCIENCE), B.C.A AND DATA SCIENCE**  
**By the end of the Programme, the students will be able to**

|      |                                                                                                                                                                                                                                                 |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PO1  | Communicate in English the ideas, findings, and results effectively through conversations, meetings, and reports, especially through digital means. Develop linguistic skills in one Indian/Regional language.                                  |
| PO2  | Demonstrate knowledge of the domain's concepts, principles, theories, and techniques and allied subject areas.                                                                                                                                  |
| PO3  | Synergise knowledge with Analytical and experimental skills to systematically create & run programs/carry out experiments/formulate & prove theories to enrich the body of knowledge                                                            |
| PO4  | Synthesize learned knowledge and acquired skills to Identify and critically analyze pertinent problems in the relevant discipline using appropriate tools and techniques.                                                                       |
| PO5  | Exhibit potential to accomplish tasks independently or as a member or leader of a team.                                                                                                                                                         |
| PO6  | Utilize specialized instruments and equipment, Computers, Software, the Internet, and other ICT tools to conduct experiments.                                                                                                                   |
| PO7  | Demonstrate knowledge and scientific understanding to design experiments, use appropriate methodologies, analyze and interpret data and provide solutions, and Exhibit organizational skills and the ability to manage time and resources.      |
| PO8  | Create Compounds/Products/Software or Design experiments and collaborate to help Society build a Sustainable Environment.                                                                                                                       |
| PO9  | Discover a passion for Lifelong Learning through MOOCs, ODL, and Self-learning techniques through optimum use of ICT.                                                                                                                           |
| PO10 | Identify and assess various environmental issues and suggest measures to overcome them. Exhibit Ethics and Values in professional, Social, and Personal spheres of life, caring for the underprivileged, leading to a better sustainable future |

**PROGRAMME SPECIFIC OUTCOMES (PSOs) for B.Sc. (Computer Science)**  
**By the end of the Programme, the students will be able to**

|       |                                                                                                                                                      |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO1  | Computational Ability: Implementing fundamentals of computing, computing specialization and domain knowledge suitable for job placement.             |
| PSO2  | Problem Analysis: Identify, formulate and analyze complex real-life problems in terms of mathematical modelling and computer science.                |
| PSO3  | Design /Development of solutions: Design algorithms for complex, real-world problems through computing systems, components or processes.             |
| PSO4  | Investigate Problems: Ability to analyze and investigate complex computing problems by designing experiments analysing and interpreting data.        |
| PSO5  | Tool usage: Create, select, modify and apply appropriate technologies and tools to a wide range of computational activities within their limitations |
| PSO6  | Professional ethics: Ability to perform professional practices ethically, keeping in mind cyber regulations & laws.                                  |
| PSO7  | Self-learning: Ability to engage in independent learning for continuous self-development as a computing professional.                                |
| PSO8  | Communication: Ability to effectively communicate with the technical community                                                                       |
| PSO 9 | Individual and Teamwork: Ability to work in a hierarchical team both as a member and leader.                                                         |

|        |                                                                                               |
|--------|-----------------------------------------------------------------------------------------------|
| PSO 10 | Innovation and entrepreneurship: Ability to apply innovative ideas to become an entrepreneur. |
|--------|-----------------------------------------------------------------------------------------------|

#### MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES

| Programme Specific Outcomes (PSOs) | Programme Outcomes (POs) |     |     |     |     |     |     |     |     |      |
|------------------------------------|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                                    | PO1                      | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| PSO1                               | ✓                        | ✓   |     |     | ✓   | ✓   | ✓   |     |     |      |
| PSO2                               | ✓                        |     | ✓   | ✓   | ✓   |     | ✓   |     |     |      |
| PSO3                               | ✓                        | ✓   | ✓   | ✓   |     |     | ✓   |     |     |      |
| PSO4                               | ✓                        | ✓   | ✓   | ✓   |     |     | ✓   | ✓   | ✓   |      |
| PSO5                               | ✓                        |     |     |     | ✓   | ✓   | ✓   | ✓   |     |      |
| PSO6                               | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO7                               | ✓                        |     | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |      |
| PSO8                               | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO9                               | ✓                        |     |     |     | ✓   | ✓   |     | ✓   | ✓   |      |
| PSO10                              | ✓                        |     |     |     | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |

#### Mapping Correlation Benchmark

| Mapping     | 1-30% | 31-60%   | 61-70% | 71-100%   |
|-------------|-------|----------|--------|-----------|
| Matches     | 1-24  | 25-50    | 51-56  | 57-80     |
| Correlation | Poor  | Moderate | High   | Very High |

**COURSE STRUCTURE FOR B.Sc. COMPUTER SCIENCE**  
**(For Students admitted from the academic year 2023-2024)**

| Part                | Category                                                          | Course Code           | Course Title                              | Hrs./ Week | Credit    | Exam. Hrs. | CIA        | ESE        | TOTAL      |
|---------------------|-------------------------------------------------------------------|-----------------------|-------------------------------------------|------------|-----------|------------|------------|------------|------------|
| <b>SEMESTER I</b>   |                                                                   |                       |                                           |            |           |            |            |            |            |
| I                   | Generic Elective Languages<br>(To choose 1 out of 4)              | UCTATL11              | Tamil I                                   | 6          | 3         | 3          | 25         | 75         | 100        |
|                     |                                                                   | UCURTL11              | Urdu I                                    |            |           |            |            |            |            |
|                     |                                                                   | UCARTL11              | Arabic I                                  |            |           |            |            |            |            |
|                     |                                                                   | UCHDTL11              | Hindi I                                   |            |           |            |            |            |            |
| II                  | English                                                           | UCENTL11              | English I                                 | 4          | 3         | 3          | 25         | 75         | 100        |
| III                 | Core Course 1                                                     | UCCCTC11              | Python Programming                        | 5          | 4         | 3          | 25         | 75         | 100        |
|                     | Core Course 2                                                     | UCCCPC12              | Python Programming Lab                    | 3          | 3         | 3          | 25         | 75         | 100        |
|                     | Elective 1                                                        | UCCCTA11/<br>UCCCTA12 | Allied – Mathematics I/<br>Statistics I   | 5          | 4         | 3          | 25         | 75         | 100        |
| IV                  | Skill Enhancement Course SEC1                                     | UCCCP511              | Computational Mathematics Lab I           | 3          | 2         | 3          | 25         | 75         | 100        |
|                     | Foundation Course                                                 | UCCCTF11              | Problem-Solving Technique - Lab           | 2          | 2         | 2          | 25         | 75         | 100        |
|                     | Ability Enhancement Compulsory Course AEC1                        | UCSSTM11              | Soft Skill I                              | 2          | 2         | 3          | 25         | 75         | 100        |
|                     |                                                                   |                       | <b>TOTAL</b>                              | <b>30</b>  | <b>23</b> | <b>-</b>   | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER II</b>  |                                                                   |                       |                                           |            |           |            |            |            |            |
| I                   | Generic Elective Languages<br>(To choose 1 out of 4)              | UCTATL21              | Tamil II                                  | 6          | 3         | 3          | 25         | 75         | 100        |
|                     |                                                                   | UCURTL21              | Urdu II                                   |            |           |            |            |            |            |
|                     |                                                                   | UCARTL21              | Arabic II                                 |            |           |            |            |            |            |
|                     |                                                                   | UCHDTL21              | Hindi II                                  |            |           |            |            |            |            |
| II                  | English                                                           | UCENTL21              | English II                                | 4          | 3         | 3          | 25         | 75         | 100        |
| III                 | Core Course 3                                                     | UCCCTC21              | Data Structure and Algorithms             | 5          | 5         | 3          | 25         | 75         | 100        |
|                     | Core Course 4                                                     | UCCCPC22              | Data Structure and Algorithms Lab         | 3          | 3         | 3          | 25         | 75         | 100        |
|                     | Elective 2                                                        | UCCCTA21/<br>UCCCTA22 | Allied – Mathematics II/<br>Statistics II | 5          | 3         | 3          | 25         | 75         | 100        |
| IV                  | Skill Enhancement Course SEC2                                     | UCCCP521              | Computational Mathematics Lab II          | 3          | 2         | 3          | 25         | 75         | 100        |
|                     | Skill Enhancement Course SEC3<br>[Foundation Course –Major Dept.] | UCCCP522              | Office Automation Lab                     | 2          | 2         | 2          | 25         | 75         | 100        |
|                     | Ability Enhancement Compulsory Course AEC2                        | UCSSTM21              | Soft Skill II                             | 2          | 2         | 3          | 25         | 75         | 100        |
|                     |                                                                   |                       | <b>TOTAL</b>                              | <b>30</b>  | <b>23</b> | <b>-</b>   | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER III</b> |                                                                   |                       |                                           |            |           |            |            |            |            |
| I                   | Generic Elective Languages<br>(To choose 1 out of 4)              | UCTATL31              | Tamil III                                 | 6          | 3         | 3          | 25         | 75         | 100        |
|                     |                                                                   | UCURTL31              | Urdu III                                  |            |           |            |            |            |            |
|                     |                                                                   | UCARTL31              | Arabic III                                |            |           |            |            |            |            |
|                     |                                                                   | UCHDTL31              | Hindi III                                 |            |           |            |            |            |            |
| II                  | English                                                           | UCENTL31              | English III                               | 4          | 3         | 3          | 25         | 75         | 100        |
| III                 | Core Course 5                                                     | UCCSTC31              | Microprocessor and Microcontroller        | 5          | 5         | 3          | 25         | 75         | 100        |

|    |                                                           |          |                                                   |           |           |          |            |            |            |
|----|-----------------------------------------------------------|----------|---------------------------------------------------|-----------|-----------|----------|------------|------------|------------|
|    | Core Course 6                                             | UCCSPC32 | Microprocessor and Microcontroller Lab III        | 3         | 3         | 3        | 25         | 75         | 100        |
|    | Elective 3                                                | UCCSTA31 | Statistical Methods and their Applications I      | 5         | 4         | 3        | 25         | 75         | 100        |
| IV | Skill Enhancement Course SEC4                             | UCCSPS31 | Statistical Methods and their Applications Lab -I | 3         | 1         | 3        | 25         | 75         | 100        |
|    | Skill Enhancement Course SEC5 [Major Dept.] [Online Exam] | UCCCOS32 | Fundamentals of Information Technology            | 1         | 1         | 2        | 25         | 75         | 100        |
|    | EVS [Allied Dept.]                                        | -        | Environmental Studies                             | 1         | -         | -        | -          | -          | -          |
|    | Ability Enhancement Compulsory Course AEC3                | UCSSTM31 | Soft Skill III                                    | 2         | 2         | 3        | 25         | 75         | 100        |
|    |                                                           |          | <b>TOTAL</b>                                      | <b>30</b> | <b>22</b> | <b>-</b> | <b>225</b> | <b>675</b> | <b>800</b> |

| SEMESTER IV |                                                      |                        |                                                    |           |           |          |            |            |            |
|-------------|------------------------------------------------------|------------------------|----------------------------------------------------|-----------|-----------|----------|------------|------------|------------|
| I           | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL41               | Tamil IV                                           | 6         | 3         | 3        | 25         | 75         | 100        |
|             |                                                      | UCURTL41               | Urdu IV                                            |           |           |          |            |            |            |
|             |                                                      | UCARTL41               | Arabic IV                                          |           |           |          |            |            |            |
|             |                                                      | UCHDTL41               | Hindi IV                                           |           |           |          |            |            |            |
| II          | English                                              | UCENTL41               | English IV                                         | 4         | 3         | 3        | 25         | 75         | 100        |
| III         | Core Course 7                                        | UCCCTC41               | Java Programming                                   | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Core Course 8                                        | UCCCPC42               | Java Programming Lab IV                            | 3         | 3         | 3        | 25         | 75         | 100        |
|             | Elective 4                                           | UCCSTA41               | Statistical Methods and their Applications II      | 4         | 4         | 3        | 25         | 75         | 100        |
| IV          | Skill Enhancement Course SEC6                        | UCCSPS41               | Statistical Methods and their Applications Lab -II | 3         | 2         | 3        | 25         | 75         | 100        |
|             | Skill Enhancement Course 4 [Major Dept]              | UCCSTS42               | PHP Programming/Introduction to HTML               | 2         | 2         | 2        | 25         | 75         | 100        |
|             | EVS [Allied Dept] [Online Exam]                      | UCESOM41               | Environmental Studies                              | 1         | 2         | 2        | 25         | 75         | 100        |
|             | Ability Enhancement Compulsory Course AEC4           | UCSSTM41               | Soft Skill IV                                      | 2         | 2         | 3        | 25         | 75         | 100        |
|             |                                                      |                        | <b>TOTAL</b>                                       | <b>30</b> | <b>25</b> | <b>-</b> | <b>225</b> | <b>675</b> | <b>900</b> |
| SEMESTER V  |                                                      |                        |                                                    |           |           |          |            |            |            |
| III         | Core Course 9                                        | UCCSTC51               | Software Engineering                               | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Core Course 10                                       | UCCSTC52               | Database management System                         | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Core Course 11                                       | UCCSPC53               | Database Management System Lab V                   | 4         | 3         | 3        | 25         | 75         | 100        |
|             | Core Course 12                                       | UCCSJC51               | Project with Viva Voce                             | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Discipline-Specific Elective 1                       | UCCSTE51/<br>UCCSTE52/ | 1. Artificial Intelligence<br>2. Robotics and its  | 4         | 4         | 3        | 25         | 75         | 100        |



|                    |                                                                                                                                           |                        |                                                                  |            |            |          |             |             |             |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------|------------|------------|----------|-------------|-------------|-------------|
|                    |                                                                                                                                           |                        | Applications                                                     |            |            |          |             |             |             |
|                    | Discipline-Specific Elective 2                                                                                                            | UCCSTE53/<br>UCCSTE54/ | 1. Introduction to Data Science<br>2. Computational Intelligence | 3          | 3          | 3        | 25          | 75          | 100         |
| IV                 | VED [Online Exam]                                                                                                                         | UCVEOM51               | Value Education                                                  | 2          | 2          | 2        | 25          | 75          | 100         |
|                    | Summer Internship/Industrial Training (30 Hours)                                                                                          | UCCSIM51               | Internship/Industrial Training                                   | 2          | 2          | 3        | 25          | 75          | 100         |
|                    |                                                                                                                                           |                        | <b>TOTAL</b>                                                     | <b>30</b>  | <b>26</b>  | <b>-</b> | <b>200</b>  | <b>600</b>  | <b>800</b>  |
| <b>SEMESTER VI</b> |                                                                                                                                           |                        |                                                                  |            |            |          |             |             |             |
| III                | Core Course 13                                                                                                                            | UCCSTC61               | .NET Programming                                                 | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 14                                                                                                                            | UCCSPC62               | .NET Programming Lab VI                                          | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 15                                                                                                                            | UCCCTC63               | Computer Networks                                                | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 3                                                                                                            | UCCSTE61/<br>UCCSTE62/ | 1. Mobile Application Development<br>2. Machine Learning         | 5          | 3          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 4                                                                                                            | UCCSPE63/<br>UCCSPE64  | 1. Mobile Application Development Lab<br>2. Machine Learning Lab | 5          | 3          | 3        | 25          | 75          | 100         |
| IV                 | Professional Competency [Online Exam]                                                                                                     | UCCSOP61               | General Awareness for Competitive Examinations                   | 2          | 2          | 2        | 25          | 75          | 100         |
| V                  | Extension Activity                                                                                                                        | UCEXAM61               | Extension Activity                                               | -          | 1          | -        | 25          | 75          | 100         |
|                    | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC [ Mandatory Online Course to be eligible for obtaining the UG degree. |                        |                                                                  |            |            |          |             |             |             |
|                    |                                                                                                                                           |                        | <b>TOTAL</b>                                                     | <b>30</b>  | <b>21</b>  | <b>-</b> | <b>175</b>  | <b>525</b>  | <b>700</b>  |
|                    |                                                                                                                                           |                        | <b>Grand Total</b>                                               | <b>180</b> | <b>140</b> | <b>-</b> | <b>1200</b> | <b>3600</b> | <b>4800</b> |

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**PROGRAMME SPECIFIC OUTCOMES (PSOs) for B.C.A**  
**By the end of the Programme, the students will be able to**

|      |                                                                                                                                        |
|------|----------------------------------------------------------------------------------------------------------------------------------------|
| PSO1 | Computational Ability: Implementing computing fundamentals, computing specialization, and domain knowledge suitable for job placement. |
|------|----------------------------------------------------------------------------------------------------------------------------------------|

|        |                                                                                                                                               |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| PSO2   | Problem Analysis: Identify, formulate, and analyze complex real-life problems in terms of mathematical modeling and computer science.         |
| PSO3   | Design /Development of solutions: Design algorithms for complex, real-world problems through computing systems, components, or processes.     |
| PSO4   | Investigate Problems: Ability to analyze and investigate complex computing problems by designing experiments analyzing and interpreting data. |
| PSO5   | Exploration: Ability to explore the stored data to bring out valuable information.                                                            |
| PSO6   | Professional ethics: Ability to perform professional practices ethically, keeping in mind cyber regulations & laws.                           |
| PSO7   | Self-learning: Ability to engage in independent learning for continuous self-development as a computing professional.                         |
| PSO8   | Communication: Ability to effectively communicate with the technical community                                                                |
| PSO 9  | Individual and Teamwork: Ability to work in a hierarchical team as a member and leader.                                                       |
| PSO 10 | Innovation and entrepreneurship: Ability to apply innovative ideas to become an entrepreneur.                                                 |

#### MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES

| Programme Specific Outcomes (PSOs) | Programme Outcomes (POs) |     |     |     |     |     |     |     |     |      |
|------------------------------------|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                                    | PO1                      | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| PSO1                               | ✓                        | ✓   |     |     | ✓   | ✓   | ✓   |     |     |      |
| PSO2                               | ✓                        |     | ✓   | ✓   | ✓   |     | ✓   |     |     |      |
| PSO3                               | ✓                        | ✓   | ✓   | ✓   |     |     | ✓   |     |     |      |
| PSO4                               | ✓                        | ✓   | ✓   | ✓   |     |     | ✓   | ✓   | ✓   |      |
| PSO5                               | ✓                        |     |     |     | ✓   | ✓   | ✓   | ✓   |     |      |
| PSO6                               | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO7                               | ✓                        |     | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |      |
| PSO8                               | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO9                               | ✓                        |     |     |     | ✓   | ✓   |     | ✓   | ✓   |      |
| PSO10                              | ✓                        |     |     |     | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |

#### Mapping Correlation Benchmark

| Mapping     | 1-30% | 31-60%   | 61-70% | 71-100%   |
|-------------|-------|----------|--------|-----------|
| Matches     | 1-24  | 25-50    | 51-56  | 57-80     |
| Correlation | Poor  | Moderate | High   | Very High |

#### COURSE STRUCTURE FOR B.C.A. (For Students admitted from 2023-2024)

| Part                | Category                                             | Course Code           | Course Title                                       | Hrs./ Week | Credit    | Exam. Hrs. | CIA        | ESE        | TOTAL      |
|---------------------|------------------------------------------------------|-----------------------|----------------------------------------------------|------------|-----------|------------|------------|------------|------------|
| <b>SEMESTER I</b>   |                                                      |                       |                                                    |            |           |            |            |            |            |
| I                   | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL11              | Tamil I                                            | 6          | 3         | 3          | 25         | 75         | 100        |
|                     |                                                      | UCURTL11              | Urdu I                                             |            |           |            |            |            |            |
|                     |                                                      | UCARTL11              | Arabic I                                           |            |           |            |            |            |            |
|                     |                                                      | UCHDTL11              | Hindi I                                            |            |           |            |            |            |            |
| II                  | English                                              | UCENTL11              | English I                                          | 4          | 3         | 3          | 25         | 75         | 100        |
| III                 | Core Course 1                                        | UCCCTC11              | Python Programming                                 | 5          | 4         | 3          | 25         | 75         | 100        |
|                     | Core Course 2                                        | UCCPC12               | Python Programming Lab                             | 3          | 3         | 3          | 25         | 75         | 100        |
|                     | Elective 1                                           | UCCCTA11/<br>UCCCTA12 | Allied – Mathematics I/<br>Statistics I            | 5          | 4         | 3          | 25         | 75         | 100        |
| IV                  | Skill Enhancement Course SEC1                        | UCCCP511              | Computational Mathematics Lab I                    | 3          | 2         | 3          | 25         | 75         | 100        |
|                     | Foundation Course                                    | UCBCPF11              | Structured Programming in C Lab                    | 2          | 2         | 2          | 25         | 75         | 100        |
|                     | Ability Enhancement Compulsory Course AEC1           | UCSSTM11              | Soft Skill I                                       | 2          | 2         | 3          | 25         | 75         | 100        |
|                     |                                                      |                       | <b>TOTAL</b>                                       | <b>30</b>  | <b>23</b> | <b>-</b>   | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER II</b>  |                                                      |                       |                                                    |            |           |            |            |            |            |
| I                   | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL21              | Tamil II                                           | 6          | 3         | 3          | 25         | 75         | 100        |
|                     |                                                      | UCURTL21              | Urdu II                                            |            |           |            |            |            |            |
|                     |                                                      | UCARTL21              | Arabic II                                          |            |           |            |            |            |            |
|                     |                                                      | UCHDTL21              | Hindi II                                           |            |           |            |            |            |            |
| II                  | English                                              | UCENTL21              | English II                                         | 4          | 3         | 3          | 25         | 75         | 100        |
| III                 | Core Course 3                                        | UCBCTC21              | Object-Oriented Programming Concepts Using C++     | 5          | 5         | 3          | 25         | 75         | 100        |
|                     | Core Course 4                                        | UCBCPC22              | Object-Oriented Programming Concepts Using C++ Lab | 3          | 3         | 3          | 25         | 75         | 100        |
|                     | Elective 2                                           | UCCCTA21/<br>UCCCTA22 | Allied – Mathematics II/<br>Statistics II          | 5          | 3         | 3          | 25         | 75         | 100        |
| IV                  | Skill Enhancement Course SEC2                        | UCCCP521              | Computational Mathematics Lab II                   | 3          | 2         | 3          | 25         | 75         | 100        |
|                     | Skill Enhancement Course SEC3                        | UCCCP522              | Office Automation Lab                              | 2          | 2         | 2          | 25         | 75         | 100        |
|                     | Ability Enhancement Compulsory Course AEC2           | UCSSTM21              | Soft Skill II                                      | 2          | 2         | 3          | 25         | 75         | 100        |
|                     |                                                      |                       | <b>TOTAL</b>                                       | <b>30</b>  | <b>23</b> | <b>-</b>   | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER III</b> |                                                      |                       |                                                    |            |           |            |            |            |            |
| I                   | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL31              | Tamil III                                          | 6          | 3         | 3          | 25         | 75         | 100        |
|                     |                                                      | UCURTL31              | Urdu III                                           |            |           |            |            |            |            |
|                     |                                                      | UCARTL31              | Arabic III                                         |            |           |            |            |            |            |

|     |                                                           |          |                                        |           |           |          |            |            |            |
|-----|-----------------------------------------------------------|----------|----------------------------------------|-----------|-----------|----------|------------|------------|------------|
|     |                                                           | UCHDTL31 | Hindi III                              |           |           |          |            |            |            |
| II  | English                                                   | UCENTL31 | English III                            | 4         | 3         | 3        | 25         | 75         | 100        |
| III | Core Course 5                                             | UCBCTC31 | Data Structures and Algorithms         | 5         | 5         | 3        | 25         | 75         | 100        |
|     | Core Course 6                                             | UCBCPC32 | Data Structures and Algorithms Lab     | 3         | 3         | 3        | 25         | 75         | 100        |
|     | Elective 3                                                | UCBCTA31 | Financial Accounting                   | 5         | 4         | 3        | 25         | 75         | 100        |
| IV  | Skill Enhancement Course SEC4                             | UCBCPS31 | Financial Accounting Lab               | 3         | 1         | 3        | 25         | 75         | 100        |
|     | Skill Enhancement Course SEC5 [Major Dept.] [Online Exam] | UCCCOS32 | Fundamentals of Information Technology | 1         | 1         | 2        | 25         | 75         | 100        |
|     | EVS [Allied Dept.]                                        | -        | Environmental Studies                  | 1         | -         | -        | -          | -          | -          |
|     | Ability Enhancement Compulsory Course AEC3                | UCSSTM31 | Soft Skill III                         | 2         | 2         | 3        | 25         | 75         | 100        |
|     |                                                           |          | <b>TOTAL</b>                           | <b>30</b> | <b>22</b> | <b>-</b> | <b>225</b> | <b>675</b> | <b>800</b> |

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| SEMESTER IV |                                                      |          |                                      |           |           |          |            |            |            |
|-------------|------------------------------------------------------|----------|--------------------------------------|-----------|-----------|----------|------------|------------|------------|
| I           | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL41 | Tamil IV                             | 6         | 3         | 3        | 25         | 75         | 100        |
|             |                                                      | UCURTL41 | Urdu IV                              |           |           |          |            |            |            |
|             |                                                      | UCARTL41 | Arabic IV                            |           |           |          |            |            |            |
|             |                                                      | UCHDTL41 | Hindi IV                             |           |           |          |            |            |            |
| II          | English                                              | UCENTL41 | English IV                           | 4         | 3         | 3        | 25         | 75         | 100        |
| III         | Core Course 7                                        | UCCCTC41 | Programming in Java                  | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Core Course 8                                        | UCCPC42  | Programming in Java Lab              | 3         | 3         | 3        | 25         | 75         | 100        |
|             | Elective 4                                           | UCBCTA41 | Cost and Management Accounting       | 4         | 4         | 3        | 25         | 75         | 100        |
| IV          | Skill Enhancement Course SEC6                        | UCBCPS41 | Cost and Management Accounting - Lab | 3         | 2         | 3        | 25         | 75         | 100        |
|             | Skill Enhancement Course SEC7 [Major Dept]           | UCCCTS42 | PHP Programming/Introduction to HTML | 2         | 2         | 2        | 25         | 75         | 100        |
|             | EVS [Allied Dept] [Online Exam]                      | UCESOM41 | Environmental Studies                | 1         | 2         | 2        | 25         | 75         | 100        |
|             | Ability Enhancement Compulsory Course AEC4           | UCSSTM41 | Soft Skill IV                        | 2         | 2         | 3        | 25         | 75         | 100        |
|             |                                                      |          | <b>TOTAL</b>                         | <b>30</b> | <b>25</b> | <b>-</b> | <b>225</b> | <b>675</b> | <b>900</b> |
| SEMESTER V  |                                                      |          |                                      |           |           |          |            |            |            |
| III         | Core Course 9                                        | UCBCTC51 | Operating System                     | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Core Course 10                                       | UCBCTC52 | ASP.Net Programming                  | 5         | 4         | 3        | 25         | 75         | 100        |
|             | Core                                                 | UCBCPC53 | ASP.Net Programming Lab V            | 4         | 3         | 3        | 25         | 75         | 100        |

|                    |                                                                                                                                           |                        |                                                                 |            |            |          |             |             |             |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------|------------|------------|----------|-------------|-------------|-------------|
|                    | Course 11                                                                                                                                 |                        |                                                                 |            |            |          |             |             |             |
|                    | Core Course 12                                                                                                                            | UCBCJC51               | Project with Viva -Voce                                         | 5          | 4          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 1                                                                                                            | UCBCTE51/<br>UCBCTE52/ | 1. Database Management System<br>2. Image Processing            | 4          | 4          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 2                                                                                                            | UCBCTE53/<br>UCCCTE54/ | 1. Software Project Management<br>2. Computational Intelligence | 3          | 3          | 3        | 25          | 75          | 100         |
| IV                 | VED [Online Exam]                                                                                                                         | UCVEOM51               | Value Education                                                 | 2          | 2          | 2        | 25          | 75          | 100         |
|                    | Summer Internship/Industrial Training (30 Hours)                                                                                          | UCBCIM51               | Internship/Industrial Training                                  | 2          | 2          | 3        | 25          | 75          | 100         |
|                    |                                                                                                                                           |                        | <b>TOTAL</b>                                                    | <b>30</b>  | <b>26</b>  | <b>-</b> | <b>200</b>  | <b>600</b>  | <b>800</b>  |
| <b>SEMESTER VI</b> |                                                                                                                                           |                        |                                                                 |            |            |          |             |             |             |
| III                | Core Course 13                                                                                                                            | UCBCTC61               | Data Analytics using R Programming                              | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 14                                                                                                                            | UCBCPC62               | R Programming Lab                                               | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 15                                                                                                                            | UCCCTC63               | Computer Networks                                               | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 3                                                                                                            | UCBCTE61/<br>UCBCTE62/ | 1. Artificial Intelligence<br>2. Information Security           | 5          | 3          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 4                                                                                                            | UCBCTE63/<br>UCBCTE64  | 1. Analytics for Service Industry<br>2. Software Metrics        | 5          | 3          | 3        | 25          | 75          | 100         |
| IV                 | Professional Competency [Online Exam]                                                                                                     | UCBCOP61               | General Awareness for Competitive Examinations                  | 2          | 2          | 2        | 25          | 75          | 100         |
| V                  | Extension Activity                                                                                                                        | UCEXAM61               | Extension Activity                                              | -          | 1          | -        | 25          | 75          | 100         |
|                    | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC [ Mandatory Online Course to be eligible for obtaining the UG degree] |                        |                                                                 |            |            |          |             |             |             |
|                    |                                                                                                                                           |                        | <b>TOTAL</b>                                                    | <b>30</b>  | <b>21</b>  | <b>-</b> | <b>175</b>  | <b>525</b>  | <b>700</b>  |
|                    |                                                                                                                                           |                        | <b>Grand Total</b>                                              | <b>180</b> | <b>140</b> | <b>-</b> | <b>1200</b> | <b>3600</b> | <b>4800</b> |

#### PROGRAM SPECIFIC OUTCOMES (PSOS)- BSC( DATA SCIENCE)

By the end of the program, students will be able to

|      |                                                                                          |
|------|------------------------------------------------------------------------------------------|
| PSO1 | Exhibit good domain knowledge and complete the assigned responsibilities Effectively and |
|------|------------------------------------------------------------------------------------------|

|       |                                                                                                                                                                                                     |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | efficiently on par with the expected quality standards.                                                                                                                                             |
| PSO2  | Apply analytical and critical thinking to identify, formulate, analyze, and solve complex problems to reach authenticated conclusions                                                               |
| PSO3  | Design and develop solutions for complex problems with specified needs through appropriate consideration and accuracy.                                                                              |
| PSO4  | Establish the ability to Listen, read, proficiently communicate, and articulate Complex ideas concerning the needs and abilities of diverse audiences.                                              |
| PSO5  | Deliver innovative ideas to instigate new business ventures and possess the qualities Of a good entrepreneur.                                                                                       |
| PSO6  | Acquire the qualities of a good leader and engage in efficient decision-making.                                                                                                                     |
| PSO7  | Graduates will be able to undertake any responsibility as an individual/member of Multidisciplinary teams and understand team leadership.                                                           |
| PSO8  | Function as a socially responsible individual with ethical values and accountability to ethically validate any actions or decisions before proceeding and actively contribute to societal concerns. |
| PSO9  | Identify and address their own educational needs in a changing world in ways sufficient to Maintain competence and to allow them to contribute to the advancement of knowledge.                     |
| PSO10 | Demonstrate knowledge and understanding of management principles and apply these to one own work to manage projects in a multidisciplinary environment.                                             |

#### MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES

| Programme Specific Outcomes (PSOs) | Programme Outcomes (POs) |     |     |     |     |     |     |     |     |      |
|------------------------------------|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                                    | PO1                      | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| PSO1                               | ✓                        | ✓   |     |     | ✓   | ✓   | ✓   |     |     |      |
| PSO2                               | ✓                        |     | ✓   | ✓   | ✓   |     |     |     |     |      |
| PSO3                               | ✓                        | ✓   | ✓   | ✓   |     |     |     |     |     |      |
| PSO4                               | ✓                        | ✓   | ✓   | ✓   |     |     |     | ✓   |     |      |
| PSO5                               | ✓                        |     |     |     | ✓   | ✓   | ✓   | ✓   |     |      |
| PSO6                               | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   |     | ✓   |     | ✓    |
| PSO7                               | ✓                        |     | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |      |
| PSO8                               | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     | ✓    |
| PSO9                               | ✓                        |     |     |     |     | ✓   |     |     |     |      |
| PSO10                              | ✓                        |     |     |     |     | ✓   | ✓   | ✓   |     | ✓    |

#### Mapping Correlation Benchmark

| Mapping     | 1-30% | 31-60%   | 61-70% | 71-100%   |
|-------------|-------|----------|--------|-----------|
| Matches     | 1-24  | 25-50    | 51-56  | 57-80     |
| Correlation | Poor  | Moderate | High   | Very High |

#### COURSE STRUCTURE FOR DATA SCIENCE (For Students admitted from 2023-2024)

| Part                | Category                                             | Course Code           | Course Title                              | Hrs./<br>Week | Credit    | Exam. Hrs. | CIA        | ESE        | TOTAL      |
|---------------------|------------------------------------------------------|-----------------------|-------------------------------------------|---------------|-----------|------------|------------|------------|------------|
| <b>SEMESTER I</b>   |                                                      |                       |                                           |               |           |            |            |            |            |
| I                   | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL11              | Tamil I                                   | 6             | 3         | 3          | 25         | 75         | 100        |
|                     |                                                      | UCURTL11              | Urdu I                                    |               |           |            |            |            |            |
|                     |                                                      | UCARTL11              | Arabic I                                  |               |           |            |            |            |            |
|                     |                                                      | UCHDTL11              | Hindi I                                   |               |           |            |            |            |            |
| II                  | English                                              | UCENTL11              | English I                                 | 4             | 3         | 3          | 25         | 75         | 100        |
| III                 | Core Course 1                                        | UCCCTC11              | Python Programming                        | 5             | 4         | 3          | 25         | 75         | 100        |
|                     | Core Course 2                                        | UCCPC12               | Python Programming Lab                    | 3             | 3         | 3          | 25         | 75         | 100        |
|                     | Elective 1                                           | UCCCTA11/<br>UCCCTA12 | Allied – Mathematics I/<br>Statistics I   | 5             | 4         | 3          | 25         | 75         | 100        |
| IV                  | Skill Enhancement Course SEC1                        | UCCCP11               | Computational Mathematics Lab I           | 3             | 2         | 3          | 25         | 75         | 100        |
|                     | Foundation Course                                    | UCCCTF11              | Problem-Solving Technique - Lab           | 2             | 2         | 3          | 25         | 75         | 100        |
|                     | Ability Enhancement Compulsory Course AEC1           | UCSSTM11              | Soft Skill I                              | 2             | 2         | 3          | 25         | 75         | 100        |
|                     |                                                      |                       | <b>TOTAL</b>                              | <b>30</b>     | <b>23</b> | <b>-</b>   | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER II</b>  |                                                      |                       |                                           |               |           |            |            |            |            |
| I                   | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL21              | Tamil II                                  | 6             | 3         | 3          | 25         | 75         | 100        |
|                     |                                                      | UCURTL21              | Urdu II                                   |               |           |            |            |            |            |
|                     |                                                      | UCARTL21              | Arabic II                                 |               |           |            |            |            |            |
|                     |                                                      | UCHDTL21              | Hindi II                                  |               |           |            |            |            |            |
| II                  | English                                              | UCENTL21              | English II                                | 4             | 3         | 3          | 25         | 75         | 100        |
| III                 | Core Course 3                                        | UCCCTC21              | Data Structure and Algorithms             | 5             | 5         | 3          | 25         | 75         | 100        |
|                     | Core Course 4                                        | UCCPC22               | Data Structure and Algorithms Lab         | 3             | 3         | 3          | 25         | 75         | 100        |
|                     | Elective 2                                           | UCCCTA21/<br>UCCCTA22 | Allied – Mathematics II/<br>Statistics II | 5             | 3         | 3          | 25         | 75         | 100        |
| IV                  | Skill Enhancement Course SEC2                        | UCCCP21               | Computational Mathematics Lab II          | 3             | 2         | 3          | 25         | 75         | 100        |
|                     | Skill Enhancement Course SEC3                        | UCCCP22               | Office Automation Lab                     | 2             | 2         | 2          | 25         | 75         | 100        |
|                     | Ability Enhancement Compulsory Course AEC2           | UCSSTM21              | Soft Skill II                             | 2             | 2         | 3          | 25         | 75         | 100        |
|                     |                                                      |                       | <b>TOTAL</b>                              | <b>30</b>     | <b>23</b> | <b>-</b>   | <b>200</b> | <b>600</b> | <b>800</b> |
| <b>SEMESTER III</b> |                                                      |                       |                                           |               |           |            |            |            |            |

|            |                                                                |          |                             |           |           |          |            |            |            |
|------------|----------------------------------------------------------------|----------|-----------------------------|-----------|-----------|----------|------------|------------|------------|
| <b>I</b>   | Generic Elective Languages<br>(To choose 1 out of 4)           | UCTATL31 | Tamil III                   | 6         | 3         | 3        | 25         | 75         | 100        |
|            |                                                                | UCURTL31 | Urdu III                    |           |           |          |            |            |            |
|            |                                                                | UCARTL31 | Arabic III                  |           |           |          |            |            |            |
|            |                                                                | UCHDTL31 | Hindi III                   |           |           |          |            |            |            |
| <b>II</b>  | English                                                        | UCENTL31 | English III                 | 4         | 3         | 3        | 25         | 75         | 100        |
| <b>III</b> | Core Course 5                                                  | UCDSTC31 | Data Science                | 5         | 5         | 3        | 25         | 75         | 100        |
|            | Core Course 6                                                  | UCDSPC32 | Data Science Lab            | 3         | 3         | 3        | 25         | 75         | 100        |
|            | Elective 3                                                     | UCDSTA31 | Discrete Mathematics I      | 5         | 4         | 3        | 25         | 75         | 100        |
| <b>IV</b>  | Skill Enhancement Course SEC4                                  | UCDSPS31 | Discrete Mathematics I Lab. | 3         | 1         | 3        | 25         | 75         | 100        |
|            | Skill Enhancement Course SEC5<br>[Major Dept]<br>[Online Exam] | UCDSOS32 | Multimedia Systems          | 1         | 1         | 2        | 25         | 75         | 100        |
|            | EVS                                                            | -        | Environmental Studies       | 1         | -         | -        | -          | -          | -          |
|            | Ability Enhancement Compulsory Course AEC3                     | UCSSTM31 | Soft Skill III              | 2         | 2         | 3        | 25         | 75         | 100        |
|            |                                                                |          | <b>TOTAL</b>                | <b>30</b> | <b>22</b> | <b>-</b> | <b>200</b> | <b>600</b> | <b>800</b> |

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| <b>SEMESTER IV</b> |                                                      |          |                                           |           |           |          |            |            |            |
|--------------------|------------------------------------------------------|----------|-------------------------------------------|-----------|-----------|----------|------------|------------|------------|
| <b>I</b>           | Generic Elective Languages<br>(To choose 1 out of 4) | UCTATL41 | Tamil IV                                  | 6         | 3         | 3        | 25         | 75         | 100        |
|                    |                                                      | UCURTL41 | Urdu IV                                   |           |           |          |            |            |            |
|                    |                                                      | UCARTL41 | Arabic IV                                 |           |           |          |            |            |            |
|                    |                                                      | UCHDTL41 | Hindi IV                                  |           |           |          |            |            |            |
| <b>II</b>          | English                                              | UCENTL41 | English IV                                | 4         | 3         | 3        | 25         | 75         | 100        |
| <b>III</b>         | Core Course 7                                        | UCDSTC41 | Object Oriented Programming with Java     | 5         | 4         | 3        | 25         | 75         | 100        |
|                    | Core Course 8                                        | UCDSPC42 | Object Oriented Programming with Java Lab | 3         | 3         | 3        | 25         | 75         | 100        |
|                    | Elective 4                                           | UCCCTA41 | Discrete Mathematics II                   | 4         | 4         | 3        | 25         | 75         | 100        |
| <b>IV</b>          | Skill Enhancement Course SEC6                        | UCCCPs41 | Discrete Mathematics II - Lab             | 3         | 2         | 3        | 25         | 75         | 100        |
|                    | Skill Enhancement Course SEC7                        | UCDSTS41 | Web Technology                            | 2         | 2         | 3        | 25         | 75         | 100        |
|                    | EVS [Eng. Dept.]                                     | UCESOM41 | Environmental Studies                     | 1         | 2         | 2        | 25         | 75         | 100        |
|                    | Ability Enhancement Compulsory Course AEC4           | UCSSTM41 | Soft Skill IV                             | 2         | 2         | 3        | 25         | 75         | 100        |
|                    |                                                      |          | <b>TOTAL</b>                              | <b>30</b> | <b>25</b> | <b>-</b> | <b>225</b> | <b>675</b> | <b>900</b> |
| <b>SEMESTER V</b>  |                                                      |          |                                           |           |           |          |            |            |            |
| <b>III</b>         | Core Course 9                                        | UCDSTC51 | Relational Database Management System     | 5         | 4         | 3        | 25         | 75         | 100        |
|                    | Core Course 10                                       | UCDSPC52 | RDBMS Using ORACLE Lab                    | 5         | 4         | 3        | 25         | 75         | 100        |
|                    | Core                                                 | UCDSTC53 | Machine Learning                          | 4         | 4         | 3        | 25         | 75         | 100        |



|                    |                                                                                                                                          |                        |                                                          |            |            |          |             |             |             |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------|------------|------------|----------|-------------|-------------|-------------|
|                    | Course 11                                                                                                                                |                        |                                                          |            |            |          |             |             |             |
|                    | Core Course 12                                                                                                                           | UCDSJC51               | Project with Viva Voce                                   | 5          | 4          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 1                                                                                                           | UCDSTE51/<br>UCDSTE52/ | Data Mining & Warehousing / Cyber Forensics              | 4          | 3          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 2                                                                                                           | UCDSTE53/<br>UCDSTE54/ | Software Testing / Network Security                      | 3          | 3          | 3        | 25          | 75          | 100         |
| <b>IV</b>          | VED (Online Exam)                                                                                                                        | UCVEOM51               | Value Education                                          | 2          | 2          | 2        | 25          | 75          | 100         |
| <b>IV</b>          | Summer Internship/Industrial Training (30 Hours)                                                                                         | UCDSIM51               | Internship/Industrial Training                           | 2          | 2          | 3        | 25          | 75          | 100         |
|                    |                                                                                                                                          |                        | <b>TOTAL</b>                                             | <b>30</b>  | <b>26</b>  | <b>-</b> | <b>200</b>  | <b>600</b>  | <b>800</b>  |
| <b>SEMESTER VI</b> |                                                                                                                                          |                        |                                                          |            |            |          |             |             |             |
|                    | Core Course 13                                                                                                                           | UCDSTC61               | IoT and Cloud Technologies                               | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 14                                                                                                                           | UCDSTC62               | IoT and Cloud Technologies –Lab VI                       | 6          | 4          | 3        | 25          | 75          | 100         |
|                    | Core Course 15                                                                                                                           | UCDSTC63               | Artificial Intelligence                                  | 6          | 4          | 3        | 25          | 75          | 100         |
| <b>III</b>         | Discipline Specific Elective 3                                                                                                           | UCDSTE61/<br>UCDSTE62/ | Biometrics / Enterprise Resource Planning                | 5          | 3          | 3        | 25          | 75          | 100         |
|                    | Discipline Specific Elective 4                                                                                                           | UCDSTE63/<br>UCDSTE64  | Open Source Software Technologies / Qualitative Aptitude | 5          | 3          | 3        | 25          | 75          | 100         |
| <b>IV</b>          | Professional Competency [Online Exam]                                                                                                    | UCDSOP61               | General Awareness for Competitive Examinations           | 2          | 2          | 2        | 25          | 75          | 100         |
| <b>V</b>           | Extension Activity                                                                                                                       | UCEXAM61               | Extension Activity                                       | -          | 1          | -        | 25          | 75          | 100         |
|                    | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC [Mandatory Online Course to be eligible for obtaining the UG degree] |                        |                                                          |            |            |          |             |             |             |
|                    |                                                                                                                                          |                        | <b>TOTAL</b>                                             | <b>30</b>  | <b>21</b>  | <b>-</b> | <b>175</b>  | <b>525</b>  | <b>700</b>  |
|                    |                                                                                                                                          |                        | <b>Grand Total</b>                                       | <b>180</b> | <b>140</b> | <b>-</b> | <b>1050</b> | <b>3250</b> | <b>4300</b> |

**REGULATIONS**  
**POSTGRADUATE DEGREE PROGRAMMES**  
**(The Students Admitted from 2023-2024)**

## **CBCS**

Choice-Based Credit System is a Flexible System of Learning. Credit defines the quantum of content/ syllabi prescribed for a course and determines the number of hours of instruction required. The distinguishing features of CBCS are the following:

### **It permits the students to:**

- Choose electives from a wide range of elective courses offered by various departments of the college
- Undergo additional courses and acquire more than the required number of credits
- Adopt an interdisciplinary approach to learning
- Make the best use of the expertise of available faculty

### **1. Eligibility for Admission**

A Student is eligible for admission to a Master's degree programme if he has successfully completed a three-year undergraduate degree awarded by any University recognized by the UGC in the same subject except for the following:

#### **For M.A. History**

Any three-year undergraduate degree holder is eligible.

#### **For M.Sc. Mathematics**

UG degree in Mathematics/Statistics are eligible.

#### **For M.Sc. Biochemistry**

UG degree in Chemistry / Biochemistry / Zoology / Biotechnology are eligible.

#### **For M.Sc. Biotechnology**

UG degree in Zoology / Biochemistry / Chemistry / Botany/ Biotechnology / Microbiology are eligible.

#### **For M.Sc. Computer Science**

UG degree in Computer Science / Software Computer Science / Computer Applications are eligible.

#### **For M.Com.**

UG degree in Commerce / Corporate Secretary ship / Industrial Organization / Business Administration / B.Com. Computer Application / B.Com. Finance & Accounts / B.A. (Eco.) with two Account Courses are eligible.

#### **For M.A. English Lit.**

Any three-year UG Course with the English language in four semesters is eligible.

### **2. Cancellation of Admission**

The admission is at the candidate's risk and is provisional, subject to the approval of Thiruvalluvar University. If, for any reason, the admission is not approved, the candidate shall not hold the College responsible for it. If selected, in the event of leaving the College after admission but any time before

completing the course, the fee for the residual period of the programme should be paid by the student as per the rules in force.

### **3. Eligibility for the Award of Degree**

Students shall be eligible for the award of the Degree only if he has undergone the prescribed course of study in this College for a period of two academic years and passed the examinations of all the Four Semesters prescribed, earning 91 credits and fulfilling such conditions as have been prescribed therefore.

### **4. Duration**

The duration of the course shall consist of 4 Semesters in two academic years.

- a. Each academic year shall be divided into two semesters. The first academic year shall comprise the first and second semesters, and the second academic year, the third and fourth semesters, respectively.
- b. The odd semesters shall consist of the period from June to November of each year and the even semesters from December to April of each year. There shall be at least 90 working days composed of 450 instructional hours for each semester.

### **5. Course of Study**

The main subject of study for Master's degree courses shall consist of the following:

**PART I:** Core Courses, Discipline Centric Elective and Elective including Project.

**PART II:** Skill Enhancement Courses, Internship, Value-Based Course

**PART III:** Extension activity

### **6. Project Work**

It is considered a special course involving the application of knowledge in solving/analyzing/exploring real-life situations / difficult problems. The new CBCS provides an opportunity for postgraduate students to learn research components at this level. The project work would be 5 credits given in lieu of one discipline-specific paper in the final semester.

The duration of the project work is 90 hours within the College campus included in the timetable. If the project work requires fieldwork in the industry/data collection / national laboratories or any other reputed institute, the period for such work is assigned as two weeks. If the project work requires fieldwork during the working days of the college, no separate hours are to be earmarked in the final semester timetable.

### **Evaluation of the Project Work**

The Project Work should be individual for PG students. Regarding the evaluation of the project work, the total mark is 100. It is divided into 75 marks for project evaluation and 25 marks for viva-voce examination. The marks for project work evaluation and viva voce are to be awarded jointly by the internal examiner and the external examiner.

The external examiner is to be drawn from related faculty from affiliating University Departments / any affiliated college offering the respective postgraduate programme under the affiliating University.

## **7. INTERNSHIP/INDUSTRIAL TRAINING**

### **Objectives:**

1. To improve the employability of students pursuing a postgraduate level in general degree Programme.
2. To focus on outcome-based learning in degree Programmes.
3. To promote active linkage between the higher education system and industry, non-commercial and commercial enterprises/organizations.

### **Duration:**

1. The Internship/Industrial training during the first-year vacation will help the students gain valuable work experience, that connects classroom knowledge to real-world experience and to narrow down and focus on the career path.
2. The period of Internship/Industrial training shall be of 30 hours duration apart from the regular teaching hours.
3. Students may commence their Internship/Industrial training from the II Semester holidays onwards.
4. The spells of Internship/Industrial training shall be scheduled either continuously or at intervals depending upon the requirement and practicality of the discipline concerned.

### **Evaluation of the Internship/Industrial Training Report**

Regarding the evaluation of the Internship/Industrial training project report and project with a viva-voce examination in the fifth semester, the total mark is 100. It is divided into 75 marks for project evaluation and 25 marks for the viva-voce examination. The marks for project work evaluation and viva-voce are to be awarded jointly by the internal examiner and the external examiner.

The external examiner is to be drawn from related faculty affiliating University Departments / any affiliated college within our University jurisdiction.

### **Credit Mechanism:**

1. Credits for the apprenticeship/internship programme shall be included in the total credits of the entire programme.
2. Five (5) Credits for the degree programme should be assigned to internship / Industrial Training.

| Programme                             | Duration                                    | Credit | Total Marks |                |
|---------------------------------------|---------------------------------------------|--------|-------------|----------------|
| Internship/Industrial Training Report | 30 hours<br>(Beyond Regular Teaching hours) | 5      | Viva        | Project Report |
|                                       |                                             |        | 25          | 75             |

### Submission of Internship / Industrial Training Reports

The projects for the PG degree programme may be independent. The format for the title page, certificate by the project advisor, declaration by the candidate(s) and the certificate for internship training shall be in the format as prescribed by the Examination Cell. The project reports duly countersigned by the Head of the Department concerned and the Principal should be submitted to the office of the Controller of Examination within the specified date.

### 8. Continuous Internal Assessment [CIA] Test

The following assessment procedure will be followed for Internal Marks:

**CIA Test I : Two / Three hours duration for 75 marks**

**CIA Test II : Three hours duration for 75 marks**

| Marks Distribution                    | Theory & Practical |
|---------------------------------------|--------------------|
| CIA Test Marks 150 to be converted to | 10 Marks           |
| Library Usage in Hours                | 5 Marks            |
| Assignment / Seminar / Observation    | 5 Marks            |
| Attendance                            | 5 Marks            |
| <b>TOTAL</b>                          | <b>25 Marks</b>    |

| Reg. No | Name | Test I - 75 | Test II - 75 | Total - 150 | Marks converted to 10 | Library Usage<br>Min. 30 hours – 5 | Assignment/<br>Seminar 5 | Attendance - 5 | Total for 25<br>(Rounded Off) |
|---------|------|-------------|--------------|-------------|-----------------------|------------------------------------|--------------------------|----------------|-------------------------------|
|         |      |             |              |             |                       |                                    |                          |                |                               |

In the last column, any fraction may be rounded off to the nearest integer.

The marks for the Attendance component in the Continuous Internal Assessment should be calculated as follows:

| Attendance Earned | Category       | Marks to be Awarded |
|-------------------|----------------|---------------------|
| 90 % and Above    | Highly Regular | 5                   |
| 75% but below 90% | Regular        | 4                   |
| 65% but below 75% | Shortage       | 3                   |
| 55% but below 65% | Detained       | 2                   |
| Below 55 %        | Redo           | 0                   |

#### Library Usage for all PG Programmes - 30 hours per Semester

| Library usage for UG in hours | Marks to be awarded |
|-------------------------------|---------------------|
| 1 hour to 10 hours            | 3                   |
| 10 hours to 20 hours          | 4                   |
| 20 hours and above            | 5                   |

#### 9. Requirements for proceeding to Subsequent Semesters

- Students shall register their names for the First Semester Examinations after admission to the P.G. Programme.
- Students shall be permitted to proceed from the First Semester up to Final Semester, irrespective of the number of arrears in any of the End Semester Examinations.
- Students shall be eligible to go to subsequent semesters as per the attendance rules prescribed by the Governing Body of Islamiah College from time to time.

#### 10. Requirement to take the End Semester Examinations

- The student will be permitted to take the University Examination for any Semester, if
  - he secures at least 75% of attendance out of the 90 instructional days / 450 instructional hours during the particular Semester.
  - he earns a progress Certificate from the Head of the Institution for having satisfactorily completed the Course of Study prescribed in the Subject as required by the Regulations, and
  - his conduct has been satisfactory.

- b) Students will be permitted to appear for Practical examinations only if they have attended 75% of the practical classes. Students who have secured attendance less than 75% but 65% and above shall be permitted to take the Examination on the recommendation of the Head of the Department and approved by the Principal to condone the lack of attendance as well on the payment of the prescribed condonation fee to the College. A Student who has secured attendance of less than 65% but 55% and above is detained for that particular semester. He / She will be permitted to write the examinations in the next Odd / Even Semester by paying the prescribed condonation fee.

The Students who have an attendance of less than 55% are detained, and they shall REDO the semester after completion of the programme and after getting re-admission, that too at the sole discretion of the Principal. However, readmission will be allowed only once during the duration of the programme. Those who asked to redo the course can continue their studies without a break, but that particular semester after completing the programme by attending the special classes arranged by HOD concerned.

The REDO students who have already completed their CIA Test and Practical Examination with at least minimum qualifying marks may be exempted from reappearing for the CIA Test and Practical Examination again in the readmitted Semester. However, if any student wishes to improve upon his marks, he can appear for the CIA Test and Practical Examinations. In such a case, the original marks or the marks secured in the readmitted semester, whichever is higher, shall be taken as final marks

### **11. Passing Minimum**

- There shall be no Passing Minimum for Internal Assessment.
- For End Semester Examinations, the minimum passing Letter Grade shall be **“P”** (Minimum 50 % of the maximum marks prescribed for the paper).
- In the aggregate (End Semester Examination + Internal) the minimum passing Letter Grade shall be **“P”** for each Paper / Practical / Project and Viva-voce.
- Final Grading shall be based on the overall Grade Points earned (Internal + External)

### **12. Grading System**

The marks earned by a candidate in the Internal Assessment and End Semester Examinations for each of the courses will be added. The marks thus obtained will then be converted into Letter Grades and Grade points as per the details given below:

| Range of Marks | Letter Grade | Grade Points |
|----------------|--------------|--------------|
| 96 – 100       | O            | 10           |
| 86 – 95        | A+           | 9            |
| 76 – 85        | A            | 8            |
| 66 – 75        | B+           | 7            |
| 55 – 65        | B            | 6            |
| 50 – 54        | C            | 5            |
| 00 – 49        | F            | 0            |
| Absent         | Ab           | 0            |

### 13. ILLUSTRATION OF SGPA

| Semester | Course                  | Credit    | Grade Letter | Grade Point | Credit Point<br>[Credit x Grade] |
|----------|-------------------------|-----------|--------------|-------------|----------------------------------|
| I        | Course 1                | 5         | A +          | 9           | 45                               |
|          | Course 2                | 5         | A            | 8           | 40                               |
|          | Course 3                | 4         | O            | 10          | 40                               |
|          | Course 4                | 4         | P            | 5           | 20                               |
|          | Elective                | 4         | B            | 6           | 24                               |
|          | <b>Total</b>            | <b>22</b> |              |             | <b>169</b>                       |
| II       | Course 1                | 5         | P            | 5           | 25                               |
|          | Course 2                | 5         | B+           | 7           | 35                               |
|          | Course 3                | 4         | O            | 10          | 40                               |
|          | Course 4                | 4         | A            | 8           | 32                               |
|          | Elective                | 4         | A+           | 9           | 36                               |
|          | <b>Total</b>            | <b>22</b> |              |             | <b>168</b>                       |
| Semester | Course                  | Credit    | Grade Letter | Grade Point | Credit Point<br>[Credit x Grade] |
| III      | Course 1                | 5         | A+           | 9           | 45                               |
|          | Course 2                | 5         | O            | 10          | 50                               |
|          | Course 3                | 4         | B            | 6           | 24                               |
|          | Course 4                | 4         | B            | 6           | 24                               |
|          | Elective                | 4         | P            | 5           | 20                               |
|          | <b>Total</b>            | <b>22</b> |              |             | <b>163</b>                       |
| IV       | Course 1                | 5         | O            | 10          | 50                               |
|          | Course 2                | 5         | A            | 8           | 40                               |
|          | Course 3                | 4         | A+           | 9           | 36                               |
|          | Course 4 / Project Work | 4         | B+           | 7           | 28                               |
|          | Elective                | 4         | P            | 5           | 20                               |
|          | Non Major Elective      | 2         | O            | 10          | 20                               |
|          | <b>Total</b>            | <b>24</b> |              |             | <b>194</b>                       |



For Example, the calculation of SGPA for the Four Semesters are calculated as follows:

$$SGPA I = \frac{169}{22} = 7.7$$

$$SGPA II = \frac{168}{22} = 7.6$$

$$SGPA III = \frac{163}{22} = 7.4$$

$$SGPA IV = \frac{194}{24} = 8.1$$

The CGPA for the PG degree is:

$$CGPA = \frac{169 + 168 + 163 + 194}{90} = \frac{694}{90} = 7.7$$

#### 14. Classification of Successful Candidates

Successful candidates who passed all the specified courses in a programme are classified as follows:

|                                                                             |                                   |
|-----------------------------------------------------------------------------|-----------------------------------|
| Passed all the courses with CGPA <b>7.5</b> and above<br>without any arrear | : First Class with<br>Distinction |
| Passed all the courses with CGPA <b>6 to 7.4</b>                            | : First Class                     |
| Passed all the courses with CGPA <b>5.5 to 5.9</b>                          | : Second Class                    |

The total performance within a semester and continuous performance starting from the first semester are indicated respectively by Grade point Average (GPA) and Cumulative Grade point Average (CGPA). These two are calculated by the following formula.

$$GPA = \frac{\sum_i C_i G_i}{\sum_i C_i} = \frac{\text{Sum of the product of credits and grade points earned}}{\text{Sum of the credits of the courses in a Semester}}$$

$$CGPA = \frac{\sum_n \sum_i C_{ni} G_{ni}}{\sum_n \sum_i C_{ni}}$$

$$= \frac{\text{Sum of the product of the credits and grade points earned}}{\text{Sum of the credits for the entire programme}}$$

Where  $C_i$  is the credit earned for the course  $i$  in any semester,  $G_i$  is the grade point obtained by the student for the course  $i$  and  $n$  is the number of courses passed in that semester.

CGPA is the GPA of all the courses starting from the first semester to the current semester.

#### 15. The Medium of Instruction and Examinations

The medium of instruction and Question Paper shall be in English. The students having arrears in any semesters shall appear for such courses in the next End Semester Examinations.

## **16. Submission of Record Notebooks for Practical Examinations**

Students taking the practical Examinations should submit Bonafide Record Note Books prescribed for the Practical Examinations. Otherwise, the candidates will not be permitted to take the Practical Examinations. However, in genuine cases, where students could not submit the record notebooks may be permitted to take the Practical Examinations provided the Head of the Department and the Course Teacher concerned certify that the candidate has performed the experiments prescribed for the course. For such candidates who do not submit Record Books, zero marks will be awarded for record notebooks in the Practical Examination concerned.

In case a candidate does not secure the prescribed passing minimum in the Practical Examination, the marks awarded for the Record Note Book at the time of first appearance for the Practical Examination should be made available by the Head of the Department concerned.

## **17. Improvement of Marks in the courses already passed**

Students who are desirous of improving the marks secured in a passed course shall reappear in the immediate next End Semester Examination. The improvement in Letter Grade shall be considered for Classification / Distinction. If there is no improvement, there shall not be any change in the original Letter Grade already obtained. The fee for such appearances will be decided by the Governing Body from time to time. The candidate will not be allowed to improve marks in the Practical, Project, Viva-Voce and field works.

## **18. Self-Supportive Courses**

The above Regulations shall apply to candidates undergoing the respective self-supportive courses also.

## **19. Rank Holders**

The students who secure the highest marks in aggregate of all the subjects in the first attempt of the autonomous examinations will be the Rank holders. This applies to all UG & PG programmes of our College. The Rank Holder will be awarded a certificate and prize.

## **20. MOOC**

All the PG Students admitted from the academic year 2023-2024 shall have to complete one MOOC (SWAYAM /NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay) of a minimum of 4 weeks

duration as mandatory during the programme as per the norms, to be eligible for obtaining the PG degree.

## 21. Transitory Provision

Students who have joined the programme from the academic year 2023-24 will be permitted to appear for the examinations under this Regulation for a maximum period of **FOUR** years. Thereafter, they will be permitted to appear for the examinations only under the new Regulations in force. The equivalent paper to be written will be decided by the Chairman of the respective BOS. Such candidates have to reregister for the course. The fee for such re-registration will be decided by the Governing Body from time to time.

## 22. QUESTION PAPER PATTERN FOR PG PROGRAMMES – 3 HOURS DURATION

|                                                |                                                                                    |                   |
|------------------------------------------------|------------------------------------------------------------------------------------|-------------------|
| <b>Part A</b>                                  | To answer All the 10 MCQs<br>(Two questions from each UNIT)                        | 10 x 1 = 10 Marks |
| <b>Part B</b>                                  | To answer All the 5 questions<br>(One question from each UNIT)                     | 5 x 2 = 10 Marks  |
| <b>Part C</b>                                  | To answer All the 5 questions<br>(either or type)<br>(One question from each UNIT) | 5 x 5 = 25 Marks  |
| <b>Part D</b>                                  | To answer 3 questions<br>(out of 5 questions)<br>(One question from each UNIT)     | 3 x10 = 30 Marks  |
| <b>TOTAL</b>                                   |                                                                                    | <b>75 Marks</b>   |
| (Equal Weightage should be given to each unit) |                                                                                    |                   |

**Question paper Pattern for Value Based Course: Human Rights**  
**50 MCQs (Answer All Questions) X 1.5 = Total 75 Marks**  
**Online Exam Duration: 2 Hours**

**ISLAMIAH COLLEGE (AUTONOMOUS)**  
**COURSE STRUCTURE FOR PG PROGRAMMES**  
**(CBCS PATTERN)**  
**(For Students admitted from 2023 – 2024)**

**M.A ENGLISH DEGREE PROGRAMME (CBCS PATTERN)**  
**PROGRAMME OUTCOMES**

- PO1** Conduct Research independently to bring out new facts and strengthen the existing body of knowledge. Communicate the findings of Research through a well-structured Report.
- PO2** Demonstrate domain-specific knowledge and its applications in real-life situations.
- PO3** Synthesise learned knowledge and skills to effectively and efficiently perform the job duties of a profession.
- PO4** Critically evaluate a situation and suggest a solution after careful consideration of the alternatives.
- PO5** Exhibit potential to accomplish tasks independently or as a member or leader of a team.
- PO6** Plan and Execute a Project after careful evaluation of the activities involved.
- PO7** Develop products, Design Policies, and collaborate to help Society build a Sustainable Environment.
- PO8** Discover a passion for Lifelong Learning through MOOCs, ODL, and Self-learning techniques through the optimum use of ICT.
- PO9** Identify the need and importance of Human Rights, especially for Women, Children, Bonded Labourers, and Refugees.
- PO10** Exhibit Ethics and Values in professional, Social, and Personal spheres of life, caring for the underprivileged, leading to a better sustainable future

**PROGRAMME SPECIFIC OUTCOMES**

|             |                                                                                    |
|-------------|------------------------------------------------------------------------------------|
| <b>PSO1</b> | Illustrate the connection between modern themes and classical and romantic ideas.  |
| <b>PSO2</b> | Explain the systematic approach to the literature and categorize it.               |
| <b>PSO3</b> | Compare the language's scientific and non-scientific ways of doing things.         |
| <b>PSO4</b> | Discovering visual art which is a vexing and complex history.                      |
| <b>PSO5</b> | Connects the language as the study of reasoning and the theory of language.        |
| <b>PSO6</b> | Defends why people are complicit with their ideological construction,              |
| <b>PSO7</b> | Develops the systematic study of literature and methods to analyze                 |
| <b>PSO8</b> | Writes effectiveness of rational inquiry and logical and empirical investigations. |

| Programme Specific Outcomes (PSOs)             | Programme Outcomes (POs) |     |     |     |     |     |     |     |     |      |
|------------------------------------------------|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                                                | PO1                      | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| PSO1                                           | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO2                                           | ✓                        | ✓   |     | ✓   | ✓   | ✓   | ✓   | ✓   |     |      |
| PSO3                                           | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |      |
| PSO4                                           | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO5                                           | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |      |
| PSO6                                           | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |      |
| PSO7                                           | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |     | ✓    |
| PSO8                                           | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     | ✓   | ✓    |
| Number of Matches = 74, Correlation: Very High |                          |     |     |     |     |     |     |     |     |      |

**MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES  
MAPPING CORRELATION BENCHMARK**

| Mapping     | 1-30% | 31-60%   | 61-70% | 71-100%   |
|-------------|-------|----------|--------|-----------|
| Matches     | 1-24  | 25-50    | 51-56  | 57-80     |
| Correlation | Poor  | Moderate | High   | Very High |

| COURSE STRUCTURE FOR M.A. ENGLISH<br>(For Students admitted from the academic year 2023-2024) |                                 |                       |                                                                               |           |        |            |     |     |       |
|-----------------------------------------------------------------------------------------------|---------------------------------|-----------------------|-------------------------------------------------------------------------------|-----------|--------|------------|-----|-----|-------|
| Part                                                                                          | Category                        | Course Code           | Course Title                                                                  | Hrs./Week | Credit | Exam. Hrs. | CIA | ESE | TOTAL |
| SEMESTER I                                                                                    |                                 |                       |                                                                               |           |        |            |     |     |       |
| I                                                                                             | Core Course I                   | PCENTC11              | English Poetry                                                                | 6         | 4      | 3          | 25  | 75  | 100   |
|                                                                                               | Core Course II                  | PCENTC12              | English Drama                                                                 | 6         | 4      | 3          | 25  | 75  | 100   |
|                                                                                               | Core Course III                 | PCENTC13              | English Fiction                                                               | 5         | 4      | 3          | 25  | 75  | 100   |
|                                                                                               | Core Course IV                  | PCENTC14              | Women's Writing in English                                                    | 5         | 4      | 3          | 25  | 75  | 100   |
|                                                                                               | Discipline-Centric Elective I   | PCENTE11/<br>PCENTE12 | 1. Indian Writing in English<br>2. Indian English Poetry                      | 4         | 2      | 3          | 25  | 75  | 100   |
|                                                                                               | Generic Elective II             | PCENTE13/<br>PCENTE14 | 1. Theatre Art<br>2. Critical Interpretation of R.K. Narayan                  | 4         | 2      | 3          | 25  | 75  | 100   |
|                                                                                               |                                 |                       | TOTAL                                                                         | 30        | 20     | -          | 150 | 450 | 600   |
| SEMESTER II                                                                                   |                                 |                       |                                                                               |           |        |            |     |     |       |
| I                                                                                             | Core Course V                   | PCENTC21              | American Literature                                                           | 6         | 5      | 3          | 25  | 75  | 100   |
|                                                                                               | Core Course VI                  | PCENTC22              | Shakespeare Studies                                                           | 6         | 5      | 3          | 25  | 75  | 100   |
|                                                                                               | Core Course VII                 | PCENTC23              | Post-Colonial Theory and Literature                                           | 6         | 4      | 3          | 25  | 75  | 100   |
|                                                                                               | Discipline Centric Elective III | PCENTE21/<br>PCENTE22 | 1. Approaches to English Language Teaching<br>2. Interpretation of Literature | 4         | 3      | 3          | 25  | 75  | 100   |
|                                                                                               | Elective IV                     | PCENTE23/<br>PCENTE24 | 1. A Glimpse of Nobel Laureates<br>2. Modern English Literature               | 4         | 3      | 3          | 25  | 75  | 100   |
| II                                                                                            | Skill Enhancement Course SEC1   | PCENTS21              | Technology in Teaching English                                                | 4         | 2      | 3          | 25  | 75  | 100   |
|                                                                                               |                                 |                       | TOTAL                                                                         | 30        | 22     | -          | 150 | 450 | 600   |
| SEMESTER III                                                                                  |                                 |                       |                                                                               |           |        |            |     |     |       |
| I                                                                                             | Core Course VIII                | PCENTC31              | Contemporary Literary Criticism                                               | 6         | 5      | 3          | 25  | 75  | 100   |
|                                                                                               | Core Course IX                  | PCENTC32              | Canadian Studies                                                              | 6         | 5      | 3          | 25  | 75  | 100   |
|                                                                                               | Core Course X                   | PCENTC33              | Literature of the Marginalized in India                                       | 6         | 5      | 3          | 25  | 75  | 100   |
|                                                                                               | Core                            | PCENTC34              | Film and Media                                                                | 4         | 3      | 3          | 25  | 75  | 100   |

|                    |                                                                                                                                          |                       |                                                                                 |            |           |          |            |             |             |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------|------------|-----------|----------|------------|-------------|-------------|
|                    | Course XI                                                                                                                                |                       | Studies                                                                         |            |           |          |            |             |             |
|                    | Discipline Centric Elective V                                                                                                            | PCENTE31/<br>PCENTE32 | 1. Translation Studies<br>2. Technical Writing                                  | 4          | 3         | 3        | 25         | 75          | 100         |
| II                 | Skill Enhancement Course SEC2                                                                                                            | PCENTS31              | Entrepreneurship Development                                                    | 4          | 3         | 3        | 25         | 75          | 100         |
|                    | Internship [30 Hours]                                                                                                                    | PCENIM31              | Internship / Industrial Activity                                                | -          | 2         | 3        | 25         | 75          | 100         |
|                    |                                                                                                                                          |                       | <b>Total</b>                                                                    | <b>30</b>  | <b>26</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
| <b>SEMESTER IV</b> |                                                                                                                                          |                       |                                                                                 |            |           |          |            |             |             |
| I                  | Core Course XII                                                                                                                          | PCENTC41              | Twenty-First-Century Millennial Literature and Culture                          | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Core Course XIII                                                                                                                         | PCENTC42              | Subaltern Studies                                                               | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Elective VI                                                                                                                              | PCENTE41/<br>PCENPE42 | 1. New Trends of Contemporary Literature<br>2. Aesthetics in English Literature | 5          | 4         | 3        | 25         | 75          | 100         |
|                    | Core Course XIV                                                                                                                          | PCENJC41              | Project with Viva-Voce                                                          | 6          | 5         | 3        | 25         | 75          | 100         |
| II                 | Skill Enhancement Course SEC3                                                                                                            | PCENTS41/<br>PCENTS42 | 1. English Literature for NET, SET & GATE<br>2. Computer Literacy in Teaching   | 5          | 3         | 3        | 25         | 75          | 100         |
|                    | Value-Based Course [Online Exam]                                                                                                         | PCHROM41              | Human Rights                                                                    | 2          | 2         | 2        | 25         | 75          | 100         |
| III                | Extension Activity                                                                                                                       | PCEXAM41              | Extension Activity                                                              | -          | 1         | 3        | 25         | 75          | 100         |
|                    | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC[ Mandatory Online Course to be eligible for obtaining the PG degree] |                       |                                                                                 |            |           |          |            |             |             |
|                    |                                                                                                                                          |                       | <b>Total</b>                                                                    | <b>30</b>  | <b>23</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
|                    |                                                                                                                                          |                       | <b>Grand Total</b>                                                              | <b>120</b> | <b>91</b> |          | <b>650</b> | <b>1950</b> | <b>2600</b> |

**M.A. HISTORY DEGREE PROGRAMME (CBCS PATTERN)**  
**(For Students admitted from 2023-2024)**

**PROGRAMME OUTCOMES**

**Programme Outcomes (Pos):**

**PO1: Problem-Solving and Decision-Making Skills**

Apply knowledge of Management theories and Human Resource practices to solve business problems through research in a Global context. Foster analytical and critical thinking abilities for data-based decision-making.

**PO2: Ethical Value**

Ability to incorporate quality, ethical, and legal value-based perspectives to all organizational activities and in conducting one's life.

**PO3: Communication Skill**

Ability to develop communication, managerial, and interpersonal skills.

**PO4: Individual and Team Leadership Skill**

Capability to lead themselves and the team to achieve organizational goals.

**PO5: Employability Skill**

Inculcate contemporary business practices to enhance employability skills in the competitive environment.

**PO6: Entrepreneurial Skill**

Equip with skills and competencies to become an entrepreneur.

**PO7: Contribution to Society**

Succeed in career endeavors and contribute significantly to society.

**PO8: Multicultural competence**

Possess knowledge of the values and beliefs of multiple cultures and a global perspective.

**Programme Specific Outcomes (PSOs)**

**PSO1 – Placement**

To prepare the students who will demonstrate respectful engagement with others' ideas, behaviors, and beliefs and apply diverse frames of reference to decisions and actions.

**PSO 2 - Entrepreneur**

To create effective entrepreneurs by enhancing their critical thinking, problem-solving, decision-making, and leadership skills that will facilitate startups and high-potential organizations.

**PSO3 – Research and Development**

Design and implement HR systems and practices grounded in research that comply with employment laws, leading the organization towards growth and development.

**PSO4 – Contribution to Business World**

To produce employable, ethical, and innovative professionals to sustain in the dynamic business world.

**PSO 5 – Contribution to the Society**

To contribute to the development of society by collaborating with stakeholders for mutual benefit.



### MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES

| Programme Specific Outcomes (PSOs) | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| PSO1                               | 3   | 3   | 3   | 3   | 3   | 3   | 2   | 3   |
| PSO2                               | 3   | 2   | 3   | 3   | 3   | 3   | 2   | 2   |
| PSO3                               | 3   | 2   | 3   | 2   | 2   | 2   | 3   | 3   |
| PSO4                               | 3   | 3   | 3   | 3   | 3   | 3   | 2   | 2   |
| PSO5                               | 3   | 3   | 2   | 2   | 2   | 2   | 3   | 2   |

(3 – Strong) (2 – Medium) (1 – Low)

| COURSE STRUCTURE FOR M.A. HISTORY<br>(For Students admitted from the academic year 2023-2024) |                                 |                       |                                                                                  |           |        |            |     |     |       |
|-----------------------------------------------------------------------------------------------|---------------------------------|-----------------------|----------------------------------------------------------------------------------|-----------|--------|------------|-----|-----|-------|
| Part                                                                                          | Category                        | Course Code           | Course Title                                                                     | Hrs./Week | Credit | Exam. Hrs. | CIA | ESE | TOTAL |
| SEMESTER I                                                                                    |                                 |                       |                                                                                  |           |        |            |     |     |       |
| I                                                                                             | Core Course I                   | PCHITC11              | History of Ancient and Early Medieval India - Prehistory to 1206 Common Era (CE) | 6         | 4      | 3          | 25  | 75  | 100   |
|                                                                                               | Core Course II                  | PCHITC12              | Socio-Cultural History of Tamil Nadu up to 1565 CE                               | 6         | 4      | 3          | 25  | 75  | 100   |
|                                                                                               | Core Course III                 | PCHITC13              | History of World Civilizations (Excluding India)                                 | 5         | 4      | 3          | 25  | 75  | 100   |
|                                                                                               | Core Course IV                  | PCHITC14              | Muslims' Contribution to Humanity                                                | 5         | 4      | 3          | 25  | 75  | 100   |
|                                                                                               | Discipline Centric Elective I   | PCHITE11/<br>PCHITE12 | Freedom Struggle in Tamil Nadu / Indian Art and Architecture                     | 4         | 2      | 3          | 25  | 75  | 100   |
|                                                                                               | Elective II                     | PCHITE13/<br>PCHITE14 | Administrative History of Tamil Nadu / Cultural Heritage of India                | 4         | 2      | 3          | 25  | 75  | 100   |
|                                                                                               |                                 |                       | TOTAL                                                                            | 30        | 20     | -          | 150 | 450 | 600   |
| SEMESTER II                                                                                   |                                 |                       |                                                                                  |           |        |            |     |     |       |
| I                                                                                             | Core Course V                   | PCHITC21              | History of Medieval India - 1206 - 1707 CE                                       | 6         | 5      | 3          | 25  | 75  | 100   |
|                                                                                               | Core Course VI                  | PCHITC22              | Socio-Cultural History of Tamil Nadu - 1565 - 2000 C.E.                          | 6         | 5      | 3          | 25  | 75  | 100   |
|                                                                                               | Core Course VII                 | PCHITC23              | Historiography and Historical Methods                                            | 6         | 4      | 3          | 25  | 75  | 100   |
|                                                                                               | Discipline Centric Elective III | PCHITE21/<br>PCHITE22 | History of Journalism / International Migrations and Diasporic Studies           | 4         | 3      | 3          | 25  | 75  | 100   |
|                                                                                               | Elective IV                     | PCHITE23/<br>PCHITE24 | Indian Constitution / Environmental History of India                             | 4         | 3      | 3          | 25  | 75  | 100   |
| II                                                                                            | Skill Enhancement Course SEC1   | PCHITS21              | Growth of Panchayati Raj Institutions in India(with special reference to Tamil   | 4         | 2      | 3          | 25  | 75  | 100   |

|                     |                               |                       |                                                                      |           |           |          |            |            |            |
|---------------------|-------------------------------|-----------------------|----------------------------------------------------------------------|-----------|-----------|----------|------------|------------|------------|
|                     |                               |                       | <b>Nadu)</b>                                                         |           |           |          |            |            |            |
|                     |                               |                       | <b>TOTAL</b>                                                         | <b>30</b> | <b>22</b> | <b>-</b> | <b>150</b> | <b>450</b> | <b>600</b> |
| <b>SEMESTER III</b> |                               |                       |                                                                      |           |           |          |            |            |            |
| <b>I</b>            | Core Course VIII              | PCHITC31              | Colonialism and Nationalism in India                                 | 6         | 5         | 3        | 25         | 75         | 100        |
|                     | Core Course IX                | PCHITC32              | Intellectual History of India                                        | 6         | 5         | 3        | 25         | 75         | 100        |
|                     | Core Course X                 | PCHITC33              | Economic History of India since 1857 CE                              | 6         | 4         | 3        | 25         | 75         | 100        |
|                     | Core Course XI                | PCHITC34              | Tourism in Tamil Nadu                                                | 4         | 4         | 3        | 25         | 75         | 100        |
|                     | Discipline Centric Elective V | PCHITE31/<br>PCHITE32 | Principles and Techniques of Archaeology / Introduction to Sociology | 4         | 3         | 3        | 25         | 75         | 100        |
| <b>II</b>           | Skill Enhancement Course SEC2 | PCHITS31              | Communication Strategies for Leadership Success                      | 4         | 3         | 3        | 25         | 75         | 100        |
|                     | Internship [30 Hours]         | PCHIIM31              | Internship / Industrial Activity                                     | -         | 2         | 3        | 25         | 75         | 100        |
|                     |                               |                       | <b>TOTAL</b>                                                         | <b>30</b> | <b>26</b> | <b>-</b> | <b>175</b> | <b>525</b> | <b>700</b> |
| <b>SEMESTER IV</b>  |                               |                       |                                                                      |           |           |          |            |            |            |

|            |                                                                                                                                          |                       |                                                                                 |            |           |          |            |             |             |
|------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------|------------|-----------|----------|------------|-------------|-------------|
| <b>I</b>   | Core Course XII                                                                                                                          | PCHITC41              | Contemporary India                                                              | 6          | 4         | 3        | 25         | 75          | 100         |
|            | Core Course XIII                                                                                                                         | PCHITC42              | Peasant and Labour Movements in India                                           | 6          | 4         | 3        | 25         | 75          | 100         |
|            | Core Course XIV                                                                                                                          | PCHIJC41              | Project with Viva Voce                                                          | 6          | 5         | 3        | 25         | 75          | 100         |
|            | Elective VI                                                                                                                              | PCHITE41/<br>PCHITE42 | Women in India through the Ages / Science and Technology in India since 1947 CE | 5          | 4         | 3        | 25         | 75          | 100         |
| <b>II</b>  | Skill Enhancement Course SEC3                                                                                                            | PCHITS41              | Cargo and Logistics                                                             | 5          | 3         | 3        | 25         | 75          | 100         |
|            | Value-based Course [Online Exam]                                                                                                         | PCHROM41              | Human Rights                                                                    | 2          | 2         | 2        | 25         | 75          | 100         |
| <b>III</b> | Extension Activity                                                                                                                       | PCEXAM41              | Extension Activity                                                              | -          | 1         | 3        | 25         | 75          | 100         |
|            | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC[ Mandatory Online Course to be eligible for obtaining the PG degree] |                       |                                                                                 |            |           |          |            |             |             |
|            |                                                                                                                                          |                       | <b>TOTAL</b>                                                                    | <b>30</b>  | <b>23</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
|            |                                                                                                                                          |                       | <b>Grand Total</b>                                                              | <b>120</b> | <b>91</b> |          | <b>650</b> | <b>1950</b> | <b>2600</b> |

**M.COM. DEGREE PROGRAMME (CBCS PATTERN)**  
**(For Students admitted from Academic Year 2023-2024)**  
**PROGRAMME OUTCOMES**

PO1: Problem-Solving Skill: Apply knowledge of Management theories and Human Resource practices to solve business problems through research in a Global context.

PO2: Decision-Making Skill: Foster analytical and critical thinking abilities for data-based decision-making.

PO3: Ethical Value: Ability to incorporate quality, ethical, and legal value-based perspectives to all organizational activities.

PO4: Communication Skill: Ability to develop communication, managerial, and interpersonal skills.

PO5: Individual and Team Leadership Skill: Capability to lead themselves and the team to achieve organizational goals.

PO6: Employability Skill: Inculcate contemporary business practices to enhance employability skills in the competitive environment.

PO7: Entrepreneurial Skill: Equip with skills and competencies to become an entrepreneur.

PO8: Contribution to Society: Succeed in career endeavors and contribute significantly to society.

PO 9: Multicultural competence: Possess knowledge of the values and beliefs of multiple cultures and a global perspective.

PO 10: Moral and ethical awareness/reasoning: Ability to embrace moral/ethical values in conducting one's life.

| <b>COURSE STRUCTURE FOR M.COM.</b><br><b>(For Students admitted from 2023-2024)</b> |                               |                       |                                                                    |           |           |            |            |            |            |
|-------------------------------------------------------------------------------------|-------------------------------|-----------------------|--------------------------------------------------------------------|-----------|-----------|------------|------------|------------|------------|
| Part                                                                                | Category                      | Course Code           | Course Title                                                       | Hrs./Week | Credit    | Exam. Hrs. | CIA        | ESE        | TOTAL      |
| <b>SEMESTER I</b>                                                                   |                               |                       |                                                                    |           |           |            |            |            |            |
| <b>I</b>                                                                            | Core Course I                 | PCCOTC11              | Business Finance                                                   | 6         | 4         | 3          | 25         | 75         | 100        |
|                                                                                     | Core Course II                | PCCOTC12              | Digital Marketing                                                  | 6         | 4         | 3          | 25         | 75         | 100        |
|                                                                                     | Core Course III               | PCCOTC13              | Banking and Insurance                                              | 5         | 4         | 3          | 25         | 75         | 100        |
|                                                                                     | Core Course IV                | PCCOTC14              | Accounting for Managerial Decisions                                | 5         | 4         | 3          | 25         | 75         | 100        |
|                                                                                     | Discipline Centric Elective I | PCCOTE11/<br>PCCOTE12 | Security Analysis and Portfolio Management/<br>Operations Research | 4         | 2         | 3          | 25         | 75         | 100        |
|                                                                                     | Elective II                   | PCCOTE13/<br>PCCOTE14 | Strategic Human Resource Management /Labour Laws                   | 4         | 2         | 3          | 25         | 75         | 100        |
|                                                                                     |                               |                       | <b>TOTAL</b>                                                       | <b>30</b> | <b>20</b> | <b>-</b>   | <b>150</b> | <b>450</b> | <b>600</b> |

| SEMESTER II  |                                                                                                                                          |                       |                                                                          |            |           |          |            |             |             |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------------------------|------------|-----------|----------|------------|-------------|-------------|
| I            | Core Course IV                                                                                                                           | PCCOTC21              | Strategic Cost Management                                                | 6          | 5         | 3        | 25         | 75          | 100         |
|              | Core Course V                                                                                                                            | PCCOTC22              | Corporate Accounting                                                     | 6          | 5         | 3        | 25         | 75          | 100         |
|              | Core Course VI                                                                                                                           | PCCOTC23              | Setting up of Business Entities                                          | 6          | 4         | 3        | 25         | 75          | 100         |
|              | Discipline Centric Elective III                                                                                                          | PCCOTE21/<br>PCCOTE22 | Business Ethics and Corporate Sustainability/<br>Audit and Due Diligence | 4          | 3         | 3        | 25         | 75          | 100         |
|              | Elective IV                                                                                                                              | PCCOTE23/<br>PCCOTE24 | Rural and Agricultural Marketing/ Logistics and Supply Chain Management  | 4          | 3         | 3        | 25         | 75          | 100         |
| II           | Skill Enhancement Course SEC1                                                                                                            | PCCOTS21              | Advanced Business Statistics                                             | 4          | 2         | 3        | 25         | 75          | 100         |
|              |                                                                                                                                          |                       | <b>TOTAL</b>                                                             | <b>30</b>  | <b>22</b> | <b>-</b> | <b>150</b> | <b>450</b>  | <b>600</b>  |
| SEMESTER III |                                                                                                                                          |                       |                                                                          |            |           |          |            |             |             |
| I            | Core Course VII                                                                                                                          | PCCOTC31              | Taxation                                                                 | 6          | 5         | 3        | 25         | 75          | 100         |
|              | Core Course VIII                                                                                                                         | PCCOTC32              | Research Methodology                                                     | 6          | 5         | 3        | 25         | 75          | 100         |
|              | Core Course IX                                                                                                                           | PCCOTC33              | Computer Applications in Business                                        | 6          | 4         | 3        | 25         | 75          | 100         |
|              | Core Course X                                                                                                                            | PCCOTC34              | International Business                                                   | 4          | 4         | 3        | 25         | 75          | 100         |
|              | Discipline Centric Elective V                                                                                                            | PCCOTE31/<br>PCCOTE32 | Strategic Management/<br>International Financial Management              | 4          | 3         | 3        | 25         | 75          | 100         |
| II           | Skill Enhancement Course SEC2                                                                                                            | PCCOTS31              | Operations Management                                                    | 4          | 3         | 3        | 25         | 75          | 100         |
|              | Internship                                                                                                                               | PCCOIM31              | Internship / Industrial Activity                                         | -          | 2         | 3        | 25         | 75          | 100         |
|              |                                                                                                                                          |                       | <b>TOTAL</b>                                                             | <b>30</b>  | <b>26</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
| SEMESTER IV  |                                                                                                                                          |                       |                                                                          |            |           |          |            |             |             |
| I            | Core Course XI                                                                                                                           | PCCOTC41              | Corporate and Economic Laws                                              | 6          | 4         | 3        | 25         | 75          | 100         |
|              | Core Course XII                                                                                                                          | PCCOTC42              | Human Resource Analytics                                                 | 6          | 4         | 3        | 25         | 75          | 100         |
|              | Core Course XIII                                                                                                                         | PCCOJC41              | Project with Viva Voce                                                   | 6          | 5         | 3        | 25         | 75          | 100         |
|              | Elective VI                                                                                                                              | PCCOTE41/<br>PCCOTE42 | Organisational Behaviour/ Insolvency Law and Practice/Project Management | 5          | 4         | 3        | 25         | 75          | 100         |
| II           | Value-Based Course [Online Exam]                                                                                                         | PCHROM41              | Human Rights                                                             | 2          | 2         | 2        | 25         | 75          | 100         |
|              | Skill Enhancement Course SEC3                                                                                                            | PCCOTS41              | Business Analytics                                                       | 5          | 3         | 3        | 25         | 75          | 100         |
| III          | Extension Activity                                                                                                                       | PCEXAM41              | Extension Activity                                                       | -          | 1         | 3        | 25         | 75          | 100         |
|              | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC[ Mandatory Online Course to be eligible for obtaining the PG degree] |                       |                                                                          |            |           |          |            |             |             |
|              |                                                                                                                                          |                       | <b>TOTAL</b>                                                             | <b>30</b>  | <b>23</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
|              |                                                                                                                                          |                       | <b>Grand Total</b>                                                       | <b>120</b> | <b>91</b> |          | <b>650</b> | <b>1950</b> | <b>2600</b> |

## **M.Sc. DEGREE PROGRAMMES (CBCS PATTERN)**

**(For Students admitted from 2023-2024)**

### **PROGRAMME OUTCOMES FOR MATHEMATICS, PHYSICS & CHEMISTRY**

- PO1** Problem-Solving Skill: Apply knowledge of Management theories and Human Resource practices to solve business problems through research in a Global context.
- PO2** Decision-Making Skill Foster analytical and critical thinking abilities for data-based decision-making.
- PO3** Ethical Value: Ability to incorporate quality, ethical, and legal value-based perspectives to all organizational activities.
- PO4** Communication Skill: Ability to develop communication, managerial, and interpersonal skills.
- PO5** Individual and Team Leadership Skills Capability to lead themselves and the team to achieve organizational goals.
- PO6** Employability Skill Inculcate contemporary business practices to enhance employability skills in a competitive environment.
- PO7** Entrepreneurial Skill: Equip yourself with the skills and competencies to become an entrepreneur.
- PO8** Contribution to Society: Succeeds in career endeavors and contributes significantly to society.
- PO9** Multicultural competence: Possess knowledge of the values and beliefs of multiple cultures and a global perspective.
- PO10** Moral and ethical awareness/reasoning Ability to embrace moral/ethical values in conducting one's life.

## **M.Sc. MATHEMATICS DEGREE PROGRAMMES (CBCS PATTERN)**

### **PROGRAM SPECIFIC OUTCOMES (PSOs)**

By the end of the program, the students will be able to

|      |                                                                                                                                                                                   |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO1 | Placement<br>To prepare the students who will demonstrate respectful engagement with others' ideas, behaviors, and beliefs and apply diverse frames of reference to decisions and |
| PSO2 | Entrepreneur<br>To create effective entrepreneurs by enhancing their critical thinking, problem-solving,                                                                          |
| PSO3 | Research and Development<br>Design and implement HR systems and practices grounded in research that complies                                                                      |
| PSO4 | Contribution to Business World<br>To produce employable, ethical and innovative professionals to sustain in the dynamic                                                           |
| PSO5 | Contribution to the Society<br>To contribute to the development of society by collaborating with stakeholders for mutual benefit.                                                 |

### PROGRAM SPECIFIC OUTCOMES (PSOs)

By the end of the program, the students will be able to

|      |                                                                                                 |
|------|-------------------------------------------------------------------------------------------------|
| PSO1 | Understand in-depth knowledge of pure and applied mathematics.                                  |
| PSO2 | Attain the ability to solve challenging problems in Mathematics and prove the abstract theorem. |
| PSO3 | Know the specialized area of mathematics and its applications.                                  |
| PSO4 | Analyse practical problems and propose a solution.                                              |
| PSO5 | Obtain the exact solutions for society-oriented problems by mathematical models.                |
| PSO6 | Discuss in groups or individually in multidisciplinary tasks. Solution.                         |
| PSO7 | Crack the NET / SET examination conducted by UGC-CSIR / NTA or State Universities.              |
| PSO8 | Apply the mathematical concepts in real-life situations.                                        |

### MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES

| Programme Specific Outcomes (PSOs)        | Programme Outcomes (POs) |     |     |     |     |     |     |     |     |      |
|-------------------------------------------|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                                           | PO1                      | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| PSO1                                      | ✓                        | ✓   | ✓   |     |     |     | ✓   | ✓   | ✓   |      |
| PSO2                                      |                          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |     |      |
| PSO3                                      | ✓                        | ✓   |     | ✓   | ✓   | ✓   |     | ✓   | ✓   |      |
| PSO4                                      | ✓                        | ✓   |     | ✓   | ✓   |     | ✓   | ✓   | ✓   |      |
| PSO5                                      |                          | ✓   | ✓   | ✓   | ✓   |     |     |     | ✓   | ✓    |
| PSO6                                      | ✓                        | ✓   |     | ✓   | ✓   | ✓   |     | ✓   | ✓   |      |
| PSO7                                      |                          | ✓   | ✓   |     | ✓   | ✓   | ✓   | ✓   |     |      |
| PSO8                                      |                          | ✓   | ✓   |     |     | ✓   | ✓   | ✓   | ✓   | ✓    |
| Number of Matches = 52, Correlation: High |                          |     |     |     |     |     |     |     |     |      |

### Mapping Correlation Benchmark

|             |       |          |        |           |
|-------------|-------|----------|--------|-----------|
| Mapping     | 1-29% | 30-59%   | 60-69% | 70-100%   |
| Matches     | 1-24  | 25-50    | 51-56  | 57-80     |
| Correlation | Poor  | Moderate | High   | Very High |

| COURSE STRUCTURE FOR M.Sc. MATHEMATICS<br>(For Students admitted from 2023-2024) |                                                        |                       |                                                                       |           |        |            |     |     |       |
|----------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------|-----------------------------------------------------------------------|-----------|--------|------------|-----|-----|-------|
| Part                                                                             | Category                                               | Course Code           | Course Title                                                          | Hrs./Week | Credit | Exam. Hrs. | CIA | ESE | TOTAL |
| SEMESTER I                                                                       |                                                        |                       |                                                                       |           |        |            |     |     |       |
| I                                                                                | Core Course I                                          | PCMSTC11              | Algebraic Structures                                                  | 6         | 4      | 3          | 25  | 75  | 100   |
|                                                                                  | Core Course II                                         | PCMSTC12              | Real Analysis I                                                       | 6         | 4      | 3          | 25  | 75  | 100   |
|                                                                                  | Core Course III                                        | PCMSTC13              | Ordinary Differential Equations                                       | 5         | 4      | 3          | 25  | 75  | 100   |
|                                                                                  | Core Course IV                                         | PCMSTC14              | Classical Dynamics                                                    | 5         | 4      | 3          | 25  | 75  | 100   |
|                                                                                  | Discipline Centric Elective I (To choose 1 out of 2)   | PCMSTE11/<br>PCMSTE12 | Number theory and Cryptography/<br>Advanced Graph Theory              | 4         | 2      | 3          | 25  | 75  | 100   |
|                                                                                  | Elective II (To choose 1 out of 2)                     | PCMSTE13/<br>PCMSTE14 | Mathematical Programming/<br>Discrete Mathematics                     | 4         | 2      | 3          | 25  | 75  | 100   |
|                                                                                  |                                                        |                       | TOTAL                                                                 | 30        | 20     | -          | 150 | 450 | 600   |
| SEMESTER II                                                                      |                                                        |                       |                                                                       |           |        |            |     |     |       |
| I                                                                                | Core Course IV                                         | PCMSTC21              | Advanced Algebra                                                      | 6         | 5      | 3          | 25  | 75  | 100   |
|                                                                                  | Core Course V                                          | PCMSTC22              | Real Analysis II                                                      | 6         | 5      | 3          | 25  | 75  | 100   |
|                                                                                  | Core Course VI                                         | PCMSTC23              | Partial Differential Equations                                        | 6         | 4      | 3          | 25  | 75  | 100   |
|                                                                                  | Discipline Centric Elective III (To choose 1 out of 2) | PCMSTE21/<br>PCMSTE22 | Mathematical Statistics/<br>Algebraic Number Theory                   | 4         | 3      | 3          | 25  | 75  | 100   |
|                                                                                  | Elective IV (To choose 1 out of 2)                     | PCMSPE23/<br>PCMSTE24 | Modeling and Simulation with Excel - Lab /Advanced Numerical Analysis | 4         | 3      | 3          | 25  | 75  | 100   |
| II                                                                               | Skill Enhancement Course I [NME I]                     | PCMSPS21              | Mathematical Documentation using Latex - Lab                          | 4         | 2      | 3          | 25  | 75  | 100   |
|                                                                                  |                                                        |                       | TOTAL                                                                 | 30        | 22     | -          | 150 | 450 | 600   |
| SEMESTER III                                                                     |                                                        |                       |                                                                       |           |        |            |     |     |       |
| I                                                                                | Core Course VII                                        | PCMSTC31              | Complex Analysis                                                      | 6         | 5      | 3          | 25  | 75  | 100   |
|                                                                                  | Core                                                   | PCMSTC32              | Probability Theory                                                    | 6         | 5      | 3          | 25  | 75  | 100   |

|                    |                                                                                                                                          |                       |                                                     |            |           |          |            |             |             |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|------------|-----------|----------|------------|-------------|-------------|
|                    | Course VIII                                                                                                                              |                       |                                                     |            |           |          |            |             |             |
|                    | Core Course IX                                                                                                                           | PCMSTC33              | Topology                                            | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Core Course X                                                                                                                            | PCMSTC34              | Industry Modules                                    | 4          | 4         | 3        | 25         | 75          | 100         |
|                    | Discipline Centric Elective V (To choose 1 out of 2)                                                                                     | PCMSTE31<br>PCMSTE32  | Mathematical Python/<br>Fluid Dynamics              | 4          | 3         | 3        | 25         | 75          | 100         |
| II                 | Skill Enhancement Course II [NME II]                                                                                                     | PCMSTS31              | Advanced Integral Equations                         | 4          | 3         | 3        | 25         | 75          | 100         |
|                    | Internship                                                                                                                               | PCMSIM31              | Internship / Industrial Activity                    | -          | 2         | 3        | 25         | 75          | 100         |
|                    |                                                                                                                                          |                       | <b>TOTAL</b>                                        | <b>30</b>  | <b>26</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
| <b>SEMESTER IV</b> |                                                                                                                                          |                       |                                                     |            |           |          |            |             |             |
| I                  | Core Course XI                                                                                                                           | PCMSTC41              | Functional Analysis                                 | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Core Course XII                                                                                                                          | PCMSTC42              | Differential Geometry                               | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Elective VI (To choose 1 out of 2)                                                                                                       | PCMSTE41/<br>PCMSPE42 | Advanced Complex Analysis /<br>Stochastic Processes | 5          | 4         | 3        | 25         | 75          | 100         |
|                    | Core Course XIII                                                                                                                         | PCMSJC41              | Project with viva voce                              | 6          | 5         | 3        | 25         | 75          | 100         |
| II                 | Skill Enhancement Course III                                                                                                             | PCMSTS41              | Calculus of Variations                              | 5          | 3         | 3        | 25         | 75          | 100         |
|                    | Value-Based Course [Online Exam]                                                                                                         | PCHROM41              | Human Rights                                        | 2          | 2         | 2        | 25         | 75          | 100         |
| III                | Extension Activity                                                                                                                       | PCEXAM41              | Extension Activity                                  | -          | 1         | 3        | 25         | 75          | 100         |
|                    | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC[ Mandatory Online Course to be eligible for obtaining the PG degree] |                       |                                                     |            |           |          |            |             |             |
|                    |                                                                                                                                          |                       | <b>Total</b>                                        | <b>30</b>  | <b>23</b> | <b>-</b> | <b>75</b>  | <b>525</b>  | <b>700</b>  |
|                    |                                                                                                                                          |                       | <b>GRAND TOTAL</b>                                  | <b>120</b> | <b>91</b> | <b>-</b> | <b>650</b> | <b>1950</b> | <b>2600</b> |



## M.Sc. PHYSICS DEGREE PROGRAMMES (CBCS PATTERN)

### PROGRAM SPECIFIC OUTCOMES (PSOs)

#### PROGRAM SPECIFIC OUTCOMES (PSOs):

By the end of the program, the students will be able to

PSO1 Understand principles of physics for the scientific phenomena in the classical domain.  
 PSO2 Understand the mathematical techniques for describing in-depth knowledge of physical concepts.  
 PSO3 Understand and apply statistical methods for describing the classical and quantum particles in various physical systems and processes.  
 PSO4 Understand and apply interdisciplinary concepts for understanding and describing natural Phenomena.  
 PSO5 Understand the principles of Quantum mechanics for knowing the physical systems in the Quantum arena.  
 PSO6 Provides exposure to various specializations of Physics (Solid State Physics/Nuclear Physics/Particle Physics).  
 PSO7 Provides exposure to modern experimental/theoretical methods for measurement, observation, and fundamental understanding of physical phenomena/systems.  
 PSO8 Engage in research and life-long learning to adapt to changing environment

#### MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES

| Programme Specific Outcomes (PSOs) | Programme Outcomes (POs) |     |     |     |     |     |     |     |     |      |
|------------------------------------|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                                    | PO1                      | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| PSO1                               | ✓                        | ✓   |     | ✓   |     | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO2                               | ✓                        | ✓   | ✓   | ✓   |     | ✓   | ✓   |     | ✓   | ✓    |
| PSO3                               | ✓                        | ✓   | ✓   | ✓   |     |     | ✓   | ✓   | ✓   | ✓    |
| PSO4                               | ✓                        | ✓   |     | ✓   | ✓   |     | ✓   | ✓   | ✓   | ✓    |
| PSO5                               | ✓                        | ✓   |     | ✓   |     | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO6                               | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO7                               | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO8                               | ✓                        | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |

#### Mapping Correlation Benchmark

| Mapping      | 1-29%                  | 30-59%   | 60-69% | 70-100%   |
|--------------|------------------------|----------|--------|-----------|
| Matches      | 1-24                   | 25-50    | 51-56  | 57-80     |
| Correlation  | Poor                   | Moderate | High   | Very High |
| Matching: 70 | Correlation: Very High |          |        |           |

| COURSE STRUCTURE FOR M.Sc. PHYSICS<br>(For Students admitted from 2023-2024) |                                        |                       |                                                                        |           |           |            |            |            |            |
|------------------------------------------------------------------------------|----------------------------------------|-----------------------|------------------------------------------------------------------------|-----------|-----------|------------|------------|------------|------------|
| Part                                                                         | Category                               | Course Code           | Course Title                                                           | Hrs./Week | Credit    | Exam. Hrs. | CIA        | ESE        | TOTAL      |
| SEMESTER I                                                                   |                                        |                       |                                                                        |           |           |            |            |            |            |
| I                                                                            | Core Course I                          | PCPYTC11              | Mathematical Physics                                                   | 6         | 4         | 3          | 25         | 75         | 100        |
|                                                                              | Core Course II                         | PCPYTC12              | Classical Mechanics and Relativity                                     | 5         | 4         | 3          | 25         | 75         | 100        |
|                                                                              | Core Course III                        | PCPYTC13              | Linear and Digital ICs and Applications                                | 5         | 4         | 3          | 25         | 75         | 100        |
|                                                                              | Core Course IV                         | PCPYPC14              | General Physics Practical I                                            | 6         | 4         | 3          | 25         | 75         | 100        |
|                                                                              | Discipline-Centric Elective I          | PCPYTE11/<br>PCPYTE12 | Physics of Nano Science and Technology/<br>Astrophysics                | 4         | 2         | 3          | 25         | 75         | 100        |
|                                                                              | Elective II                            | PCPYTE13/<br>PCPYTE14 | Material Science/Non-linear Dynamics                                   | 4         | 2         | 3          | 25         | 75         | 100        |
|                                                                              |                                        |                       | <b>TOTAL</b>                                                           | <b>30</b> | <b>20</b> | <b>-</b>   | <b>150</b> | <b>450</b> | <b>600</b> |
| SEMESTER II                                                                  |                                        |                       |                                                                        |           |           |            |            |            |            |
| I                                                                            | Core Course V                          | PCPYTC21              | Statistical Mechanics                                                  | 6         | 5         | 3          | 25         | 75         | 100        |
|                                                                              | Core Course VI                         | PCPYTC22              | Quantum Mechanics I                                                    | 6         | 5         | 3          | 25         | 75         | 100        |
|                                                                              | Core Course VII                        | PCPYPC23              | General Physics Practical II                                           | 6         | 4         | 3          | 25         | 75         | 100        |
|                                                                              | Discipline Centric Elective II         | PCPYTE21/<br>PCPYTE22 | General Relativity and Cosmology/Crystal Growth and Thin films         | 4         | 3         | 3          | 25         | 75         | 100        |
|                                                                              | Elective IV                            | PCPYTE23/<br>PCPYTE24 | Plasma Physics/Advanced Optics                                         | 4         | 3         | 3          | 25         | 75         | 100        |
| II                                                                           | Skill Enhancement Course SEC 1 [NME I] | PCPYTS21              | Solid Waste Management                                                 | 4         | 2         | 3          | 25         | 75         | 100        |
|                                                                              |                                        |                       | <b>TOTAL</b>                                                           | <b>30</b> | <b>22</b> | <b>-</b>   | <b>150</b> | <b>450</b> | <b>600</b> |
| SEMESTER III                                                                 |                                        |                       |                                                                        |           |           |            |            |            |            |
| I                                                                            | Core Course VIII                       | PCPYTC31              | Quantum Mechanics II                                                   | 6         | 5         | 3          | 25         | 75         | 100        |
|                                                                              | Core Course IX                         | PCPYTC32              | Condensed Matter Physics                                               | 6         | 5         | 3          | 25         | 75         | 100        |
|                                                                              | Core Course X                          | PCPYTC33              | Electromagnetic Theory                                                 | 6         | 4         | 3          | 25         | 75         | 100        |
|                                                                              | Core Course XI                         | PCPYPC34              | Numerical Methods and Computer Programming using FORTRAN & C Practical | 4         | 4         | 3          | 25         | 75         | 100        |
|                                                                              | Discipline-Centric Elective V          | PCPYTE31/<br>PCPYTE32 | Communication Electronics/Microprocessor 8086 and Microcontroller 8051 | 4         | 3         | 3          | 25         | 75         | 100        |
| II                                                                           | Skill Enhancement Course SEC2 [NME II] | PCPYTS31              | Medical Physics                                                        | 4         | 3         | 3          | 25         | 75         | 100        |
|                                                                              | Internship                             | PCPYIM31              | Internship / Industrial                                                | -         | 2         | 3          | 25         | 75         | 100        |

|                    |                                                                                                                                          |          |                                                        |            |           |          |            |             |             |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------|------------|-----------|----------|------------|-------------|-------------|
|                    |                                                                                                                                          |          | Activity                                               |            |           |          |            |             |             |
|                    |                                                                                                                                          |          | <b>TOTAL</b>                                           | <b>30</b>  | <b>26</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
| <b>SEMESTER IV</b> |                                                                                                                                          |          |                                                        |            |           |          |            |             |             |
| <b>I</b>           | Core Course XII                                                                                                                          | PCPYTC41 | Nuclear and particle Physics                           | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Core Course XII                                                                                                                          | PCPYTC42 | Spectroscopy                                           | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Core Course XIV                                                                                                                          | PCPYJC41 | Project with Viva-Voce                                 | 5          | 5         | 3        | 25         | 75          | 100         |
|                    | Elective VI                                                                                                                              | PCPYPE41 | Microprocessor 8086 and Microcontroller 8051 Practical | 5          | 4         | 3        | 25         | 75          | 100         |
| <b>II</b>          | Skill Enhancement Course III                                                                                                             | PCPYTS41 | Characterization of Materials                          | 6          | 3         | 3        | 25         | 75          | 100         |
|                    | Value-Based Course [Online Exam]                                                                                                         | PCHROM41 | Human Rights                                           | 2          | 2         | 2        | 25         | 75          | 100         |
| <b>III</b>         | Extension Activity                                                                                                                       | PCEXAM41 | Extension Activity                                     | -          | 1         | 3        | 25         | 75          | 100         |
|                    | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC[ Mandatory Online Course to be eligible for obtaining the PG degree] |          |                                                        |            |           |          |            |             |             |
|                    |                                                                                                                                          |          | <b>Total</b>                                           | <b>30</b>  | <b>23</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
|                    |                                                                                                                                          |          | <b>Grand Total</b>                                     | <b>120</b> | <b>91</b> |          | <b>650</b> | <b>1950</b> | <b>2600</b> |

### M.Sc. CHEMISTRY DEGREE PROGRAMMES (CBCS PATTERN) PROGRAM SPECIFIC OUTCOMES (PSOs)

#### Programme Specific Outcomes (PSOs)

**PSO1 – Placement**

To prepare the students who will demonstrate respectful engagement with others' ideas, behaviors, and beliefs and apply diverse frames of reference to decisions and actions.

**PSO 2 - Entrepreneur**

To create effective entrepreneurs by enhancing their critical thinking, problem-solving, decision-making, and leadership skill that will facilitate startups and high-potential organizations.

**PSO3 – Research and Development**

Design and implement HR systems and practices grounded in research that comply with employment laws, leading the organization towards growth and development.

**PSO4 – Contribution to Business World**

To produce employable, ethical, and innovative professionals to sustain in the dynamic business world.

**PSO 5 – Contribution to the Society**

To contribute to the development of society by collaborating with stakeholders for mutual benefit.

#### **PROGRAMME SPECIFIC OUTCOMES (PSO) On completion of the M.Sc Chemistry Programme,**

**By the end of the program, the students will be able to**

|      |                                                                                                                                                                           |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO1 | Orient the skill and knowledge in Computation and its applications in chemistry and handle the suitable software for the subject and correlate it with experimental data. |
| PSO2 | Apply the multi-dimensional aspects of chemistry and its applications in Material science, Molecular modelling, Drug discovery and Process Development.                   |
| PSO3 | Utilize the basic knowledge of structure, reactivity, characterization and applications of chemicals in the development of novel chemical compounds.                      |
| PSO4 | Handle the instruments employed in maintaining the quality and control of chemicals in the manufacturing process.                                                         |
| PSO5 | Extract, elucidate the structure and synthesize natural products from the available sources                                                                               |
| PSO6 | Apply the knowledge of reactions and mechanisms in the synthesis of new chemicals, their analysis and applications.                                                       |
| PSO7 | Carry out any kind of project in quality control, research and process development in the chemical industry, enhancing the job opportunities of the students.             |
| PSO8 | Communicate and work collaboratively with Technologists and Environmentalists leading to sustainable living.                                                              |

#### **MAPPING OF PROGRAMME-SPECIFIC OUTCOMES WITH PROGRAMME OUTCOMES**

| Program-Specific Outcomes (PSOs)               | Program Outcomes (POs) |     |     |     |     |     |     |     |     |      |
|------------------------------------------------|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                                                | PO1                    | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| PSO1                                           | ✓                      | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |      |
| PSO2                                           | ✓                      | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |      |
| PSO3                                           | ✓                      | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |     |      |
| PSO4                                           | ✓                      | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |     |      |
| PSO5                                           | ✓                      | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |      |
| PSO6                                           | ✓                      | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |      |
| PSO7                                           | ✓                      | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     |     | ✓    |
| PSO8                                           | ✓                      | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |
| Number of matches = 64, Correlation: Very High |                        |     |     |     |     |     |     |     |     |      |

#### **Mapping Correlation Benchmark**

| Mapping     | 1-30% | 31-60%   | 61-70% | 71-100%   |
|-------------|-------|----------|--------|-----------|
| Matches     | 1-24  | 25-50    | 51-56  | 57-80     |
| Correlation | Poor  | Moderate | High   | Very High |

| COURSE STRUCTURE FOR M.Sc. CHEMISTRY<br>(For Students admitted from 2023-2024) |                                       |                       |                                                               |           |           |            |            |            |            |
|--------------------------------------------------------------------------------|---------------------------------------|-----------------------|---------------------------------------------------------------|-----------|-----------|------------|------------|------------|------------|
| Part                                                                           | Category                              | Course Code           | Course Title                                                  | Hrs./Week | Credit    | Exam. Hrs. | CIA        | ESE        | TOTAL      |
| SEMESTER I                                                                     |                                       |                       |                                                               |           |           |            |            |            |            |
| I                                                                              | Core Course I                         | PCCHTC11              | Organic Reaction Mechanism-I                                  | 6         | 4         | 3          | 25         | 75         | 100        |
|                                                                                | Core Course II                        | PCCHTC12              | Structure and Bonding in Inorganic Compounds                  | 6         | 4         | 3          | 25         | 75         | 100        |
|                                                                                | Core Course III                       | PCCHPC13              | Practical: Organic Chemistry - I                              | 5         | 4         | 3          | 25         | 75         | 100        |
|                                                                                | Core Course IV                        | PCCHPC14              | Practical: Physical Chemistry - I                             | 5         | 4         | 3          | 25         | 75         | 100        |
|                                                                                | Discipline Centric Elective I         | PCCHTE11/<br>PCCHTE12 | Pharmaceutical Chemistry/<br>Nanomaterials and Nanotechnology | 4         | 2         | 3          | 25         | 75         | 100        |
|                                                                                | Elective II                           | PCCHTE13/<br>PCCHTE14 | Molecular Spectroscopy /<br>Pharmacognosy and Phytochemistry  | 4         | 2         | 3          | 25         | 75         | 100        |
|                                                                                |                                       |                       | <b>TOTAL</b>                                                  | <b>30</b> | <b>20</b> | <b>-</b>   | <b>150</b> | <b>450</b> | <b>600</b> |
| SEMESTER II                                                                    |                                       |                       |                                                               |           |           |            |            |            |            |
| I                                                                              | Core Course IV                        | PCCHTC21              | Organic reaction mechanism-II                                 | 6         | 5         | 3          | 25         | 75         | 100        |
|                                                                                | Core Course V                         | PCCHTC22              | Physical Chemistry-I                                          | 6         | 5         | 3          | 25         | 75         | 100        |
|                                                                                | Core Course VI                        | PCCHPC23              | Practical: Inorganic Chemistry - I                            | 6         | 4         | 3          | 25         | 75         | 100        |
|                                                                                | Discipline Centric Elective III       | PCCHTE21/<br>PCCHTE22 | Medicinal Chemistry/Green Chemistry                           | 4         | 3         | 3          | 25         | 75         | 100        |
|                                                                                | Elective IV                           | PCCHTE23/<br>PCCHTE24 | Bio-Inorganic Chemistry/Material Science                      | 4         | 3         | 3          | 25         | 75         | 100        |
| II                                                                             | Skill Enhancement Course SEC1 [NME I] | PCCHTS21              | Computational Chemistry                                       | 4         | 2         | 3          | 25         | 75         | 100        |
|                                                                                |                                       |                       | <b>TOTAL</b>                                                  | <b>30</b> | <b>22</b> | <b>-</b>   | <b>150</b> | <b>450</b> | <b>600</b> |
| SEMESTER III                                                                   |                                       |                       |                                                               |           |           |            |            |            |            |
| I                                                                              | Core Course VII                       | PCCHTC31              | Organic synthesis and Photochemistry                          | 6         | 5         | 3          | 25         | 75         | 100        |
|                                                                                | Core Course VIII                      | PCCHTC32              | Coordination Chemistry-I                                      | 6         | 5         | 3          | 25         | 75         | 100        |
|                                                                                | Core Course IX                        | PCCHPC33              | Practical: Inorganic Chemistry - II                           | 5         | 4         | 3          | 25         | 75         | 100        |
|                                                                                | Core Course X                         | PCCHPC34              | Practical: Organic Chemistry - II                             | 5         | 4         | 3          | 25         | 75         | 100        |
|                                                                                | Discipline-Centric Elective V         | PCCHTE31/<br>PCCHTE32 | Electrochemistry /<br>Biomolecules and Heterocyclic compounds | 4         | 3         | 3          | 25         | 75         | 100        |

|                    |                                                                                                                                          |                       |                                                                                                         |            |           |          |            |             |             |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------------------------|------------|-----------|----------|------------|-------------|-------------|
| II                 | Skill Enhancement Course SEC2 [NME II]                                                                                                   | PCCHTS31              | Professional Communication Skill                                                                        | 4          | 3         | 3        | 25         | 75          | 100         |
|                    | Internship (Carried out in Summer Vacation at the end of I year – 30 hours)                                                              | PCCHIM31              | Internship / Industrial Activity                                                                        | -          | 2         | 3        | 25         | 75          | 100         |
|                    |                                                                                                                                          |                       | <b>TOTAL</b>                                                                                            | <b>30</b>  | <b>26</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
| <b>SEMESTER IV</b> |                                                                                                                                          |                       |                                                                                                         |            |           |          |            |             |             |
| I                  | Core Course XI                                                                                                                           | PCCHTC41              | Coordination Chemistry-II                                                                               | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Core Course XII                                                                                                                          | PCCHTC42              | Physical Chemistry-II                                                                                   | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Elective VI                                                                                                                              | PCCHPE41/<br>PCCHPE42 | Practical: Analytical instrumentation techniques / Practical: Domestic Products preparation and testing | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Core Course XIII                                                                                                                         | PCCHJC41              | Project with viva voce                                                                                  | 6          | 5         | 3        | 25         | 75          | 100         |
| II                 | Skill Enhancement Course SEC3                                                                                                            | PCCHTS41              | Professional Competency Skill Enhancement                                                               | 4          | 3         | 3        | 25         | 75          | 100         |
|                    | Value-Based Course [Online Exam]                                                                                                         | PCHROM41              | Human Rights                                                                                            | 2          | 2         | 2        | 25         | 75          | 100         |
| III                | Extension Activity                                                                                                                       | PCEXAM41              | Extension Activity                                                                                      | -          | 1         | 3        | 25         | 75          | 100         |
|                    | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC[ Mandatory Online Course to be eligible for obtaining the PG degree] |                       |                                                                                                         |            |           |          |            |             |             |
|                    |                                                                                                                                          |                       | <b>Total</b>                                                                                            | <b>30</b>  | <b>23</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
|                    |                                                                                                                                          |                       | <b>Grand Total</b>                                                                                      | <b>120</b> | <b>91</b> | <b>-</b> | <b>650</b> | <b>1950</b> | <b>2600</b> |

**M.SC. DEGREE PROGRAMMES**  
**PROGRAMME OUTCOMES FOR BIOCHEMISTRY & BIOTECHNOLOGY**  
**PROGRAMME OUTCOMES:**

- PO1. To make students understand the importance of biochemistry as a subject that deals with life processes, as well as the concepts, theories, and experimental approaches followed in Biochemistry, in order to pursue a research career, either in an industry or academic setting.
- PO2. To develop analytical and problem-solving skills
- PO3. To create an awareness among the students of the interconnection between the Interdisciplinary areas of biochemistry.
- PO4. To give the necessary practical skills required for biochemical techniques and analysis.
- PO5. To develop communication and writing skills in students.
- PO6. To develop leadership and teamwork skills
- PO7. To emphasize the importance of good academic and work ethics and their social Implications.
- PO8. To emphasize the importance of continuous learning and to promote lifelong learning and career development.
- PO9. To teach students how to retrieve information from a variety of sources, including Libraries, databases, and the internet.
- PO10. To teach students to identify, design, and execute a research problem, and Interpret data and learn time and resource management.

**On successful completion of this course, students should be able to:**  
**PROGRAM-SPECIFIC OUTCOME FOR MASTER OF BIOCHEMISTRY**

**Knowledge Domain**

- PSO1. Outline the structure and metabolism of macromolecule and its regulation and disorders of metabolic pathways.
- PSO2. Acquire knowledge of the molecular machinery of living cells and their participation in molecular recognition.
- POS3. Acquire in-depth knowledge of Biochemistry, Microbiology, Plant Biochemistry, cell biology, toxicology, physiology, ecology, and stem cells.
- POS4. Differentiate the principle, instrumentation, and applications of different analytical techniques used in biochemistry, microbiology, biotechnology, Immunology, and molecular biology and apply the scientific methods in the research investigation and hypothesis testing.

**Skill Domain**

- POS5. Measure and identify the concentration of analytes in the given sample by using biochemical, microbiological, and molecular techniques and demonstrate independent and

critical skills necessary to formulate specific experiments and obtain reproducible data.

POS6. Make use of modern library research tools and software to locate and retrieve scientific information about techniques, bioinformatics, biostatics, genomics, and proteomics.

POS7. Develop effective communication skills (oral and written) to represent the results of the experimental work and research to pursue a career in academic and different life science industries (Pharmaceuticals, Biotech, research, Hospital, and community services). Acquire lifelong self-learning habits through online courses and the ability to plan and manage projects to achieve the objective.

Value domain

POS8. Contribute to solving environmental issues and sustainable development and enhance personal integrity, human rights, women, children, and labor rights, and ethical behavior when dealing with patients, Community members, and the healthcare team.

Mapping PO Vs PSO

| PSO  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| PSO1 | ✓   | ✓   | ✓   | ✓   |     |     |     |     |     |      |
| PSO2 | ✓   | ✓   | ✓   |     | ✓   |     |     |     |     |      |
| PSO3 | ✓   | ✓   | ✓   |     | ✓   |     |     |     | ✓   | ✓    |
| PSO4 | ✓   | ✓   |     |     |     | ✓   |     | ✓   | ✓   | ✓    |
| PSO5 | ✓   | ✓   |     | ✓   | ✓   | ✓   |     | ✓   | ✓   | ✓    |
| PSO6 | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |     | ✓   | ✓    |
| PSO7 | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓    |
| PSO8 |     |     |     |     |     | ✓   | ✓   | ✓   | ✓   | ✓    |

Mapping Correlation Benchmark

| Mapping     | 1-30% | 31-60%   | 61-70% | 71-100%   |
|-------------|-------|----------|--------|-----------|
| Matches     | 1-24  | 25-50    | 51-56  | 57-80     |
| Correlation | Poor  | Moderate | High   | Very High |



| <b>COURSE STRUCTURE FOR M.Sc. BIOCHEMISTRY</b><br><b>(For the candidates admitted from the academic year 2023-2024)</b> |                                       |                       |                                                               |           |           |            |            |            |            |
|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------|---------------------------------------------------------------|-----------|-----------|------------|------------|------------|------------|
| Part                                                                                                                    | Category                              | Course Code           | Course Title                                                  | Hrs./Week | Credit    | Exam. Hrs. | CIA        | ESE        | TOTAL      |
| <b>SEMESTER I</b>                                                                                                       |                                       |                       |                                                               |           |           |            |            |            |            |
| <b>I</b>                                                                                                                | Core Course I                         | PCBITC11              | Basics of Biochemistry                                        | 6         | 4         | 3          | 25         | 75         | 100        |
|                                                                                                                         | Core Course II                        | PCBITC12              | Biochemical and Molecular Biology Techniques                  | 6         | 4         | 3          | 25         | 75         | 100        |
|                                                                                                                         | Core Course III                       | PCBITC13              | Physiology and Cell Biology                                   | 5         | 4         | 3          | 25         | 75         | 100        |
|                                                                                                                         | Core Course IV                        | PCBIPC14              | Biomolecules and Biochemical Techniques Practical             | 5         | 4         | 3          | 25         | 75         | 100        |
|                                                                                                                         | Discipline-Centric Elective I         | PCBITE11/<br>PCBITE12 | Microbiology & Immunology/Plant Biochemistry                  | 4         | 2         | 3          | 25         | 75         | 100        |
|                                                                                                                         | Generic Elective II                   | PCBITE13/<br>PCBITE14 | Food Processing and Technology/<br>Developmental Biology      | 4         | 2         | 3          | 25         | 75         | 100        |
|                                                                                                                         |                                       |                       | <b>TOTAL</b>                                                  | <b>30</b> | <b>20</b> | <b>-</b>   | <b>150</b> | <b>450</b> | <b>600</b> |
| <b>SEMESTER II</b>                                                                                                      |                                       |                       |                                                               |           |           |            |            |            |            |
| <b>I</b>                                                                                                                | Core Course IV                        | PCBITC21              | Enzymology                                                    | 6         | 5         | 3          | 25         | 75         | 100        |
|                                                                                                                         | Core Course V                         | PCBITC22              | Cellular Metabolism                                           | 6         | 5         | 3          | 25         | 75         | 100        |
|                                                                                                                         | Core Course VI                        | PCBIPC23              | Enzymology, Microbiology and Cell Biology – Practical         | 5         | 4         | 3          | 25         | 75         | 100        |
|                                                                                                                         | Discipline Centric Elective II        | PCBITE21/<br>PCBITE22 | Energy and drug metabolism/Ecology Evolution and Biodiversity | 4         | 3         | 3          | 25         | 75         | 100        |
|                                                                                                                         | Generic Elective II                   | PCBITE23/<br>PCBITE24 | Nutritional Biochemistry/Molecular Endocrinology              | 4         | 3         | 3          | 25         | 75         | 100        |
| <b>II</b>                                                                                                               | Skill Enhancement Course SEC1 [NME I] | PCBITS21              | Industrial Microbiology                                       | 5         | 2         | 3          | 25         | 75         | 100        |
|                                                                                                                         |                                       |                       | <b>TOTAL</b>                                                  | <b>30</b> | <b>22</b> | <b>-</b>   | <b>150</b> | <b>450</b> | <b>600</b> |
| <b>SEMESTER III</b>                                                                                                     |                                       |                       |                                                               |           |           |            |            |            |            |
| <b>I</b>                                                                                                                | Core Course VII                       | PCBITC31              | Clinical Biochemistry                                         | 6         | 5         | 3          | 25         | 75         | 100        |
|                                                                                                                         | Core Course VIII                      | PCBITC32              | Molecular Biology                                             | 6         | 5         | 3          | 25         | 75         | 100        |
|                                                                                                                         | Core Course IX                        | PCBITC33              | Gene Editing, Cell and Gene therapy                           | 5         | 4         | 3          | 25         | 75         | 100        |
|                                                                                                                         | Core Course X                         | PCBIPC34              | Clinical Biochemistry Practical                               | 5         | 4         | 3          | 25         | 75         | 100        |
|                                                                                                                         | Discipline Centric                    | PCBITE31/<br>PCBITE32 | Molecular basis of disease and therapeutic                    | 4         | 3         | 3          | 25         | 75         | 100        |

|                    |                                                                                                                                                 |                       |                                                            |            |           |          |            |             |             |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------------|------------|-----------|----------|------------|-------------|-------------|
|                    | Elective III                                                                                                                                    |                       | strategies/Cancer Biology                                  |            |           |          |            |             |             |
| II                 | Skill Enhancement Course SEC2 [NME II]                                                                                                          | PCBITS31              | Biostatistics and Data Science                             | 4          | 3         | 3        | 25         | 75          | 100         |
|                    | Internship Industrial Visit – Biotech                                                                                                           | PCBIIM31              | Internship                                                 | -          | 2         | 3        | 25         | 75          | 100         |
|                    |                                                                                                                                                 |                       | <b>TOTAL</b>                                               | <b>30</b>  | <b>26</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
| <b>SEMESTER IV</b> |                                                                                                                                                 |                       |                                                            |            |           |          |            |             |             |
| I                  | Core Course XI                                                                                                                                  | PCBITC41              | Pharmaceutical Biochemistry                                | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Core Course XIII                                                                                                                                | PCBIPC42              | Molecular Biology and Immunology Practical                 | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Core Course XIV                                                                                                                                 | PCBIJC41              | Project with Viva-Voce                                     | 6          | 5         | 3        | 25         | 75          | 100         |
|                    | Generic Elective VI                                                                                                                             | PCBITE41/<br>PCBITE42 | Biochemical Toxicology /Bio-safety, Lab Safety and IPR     | 6          | 4         | 3        | 25         | 75          | 100         |
| II                 | Skill Enhancement Course SEC3                                                                                                                   | PCBITS41              | Quantitative Aptitude for Competitive Exam in Biochemistry | 4          | 3         | 3        | 25         | 75          | 100         |
|                    | Value Based Course {Online Exam}                                                                                                                | PCHROM41              | Human Rights                                               | 2          | 2         | 2        | 25         | 75          | 100         |
| III                | Extension Activity Industrial Visit – Pharma or Food Processing                                                                                 | PCEXAM41              | Extension Activity                                         | -          | 1         | 3        | 25         | 75          | 100         |
|                    | <b>SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC[ Mandatory Online Course to be eligible for obtaining the PG degree]</b> |                       |                                                            |            |           |          |            |             |             |
|                    |                                                                                                                                                 |                       | <b>Total</b>                                               | <b>30</b>  | <b>23</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
|                    |                                                                                                                                                 |                       | <b>Grand Total</b>                                         | <b>120</b> | <b>91</b> |          | <b>650</b> | <b>1950</b> | <b>2600</b> |

### PROGRAMME SPECIFIC OUTCOMES (PSOs) FOR M.Sc. BIOTECHNOLOGY

Upon completion of the M.Sc. Biotechnology Programme, the students will be able to:

PSO 1: Evolve with recent innovations and scientific updates in various thrust areas of biotechnology by the best scientific temperament and professional and research ethics throughout life.

PSO 2: Apply broad multidisciplinary knowledge and transferable skills in biotechnology and related subjects suitable for employment in the pharmaceutical and biotechnology industry, government research institutes or other agencies.

PSO3: Contribute to innovative thinking, scientific approach, and problem-solving skills for various health, environmental, cultural and social issues through scientific knowledge.

PSO 4: Recognize ethical issues in connection with recombinant DNA technology, gene cloning, animal manipulation, IPR, biosecurity and the management of sensitive experiments.

PSO 5: Discriminate data beautification and data manipulation / scientific misconduct.

PSO 6: Make use of ICT to carry out and deliver the research works and assignments independently and with a team of students across disciplines.

PSO 7: Practice research & professional ethics as well as the responsibility of SOPs.

PSO8: Evolve with recent innovations and scientific updates in the technological era following the best scientific temperament and professional and research ethics throughout life.

### MAPPING OF PROGRAMME SPECIFIC OUTCOMES (M.Sc.) WITH PROGRAMME OUTCOMES

| Programme Specific Outcomes (PSOs)        | Programme Outcomes (PO) |     |     |     |     |     |     |     |     |      |
|-------------------------------------------|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                                           | PO1                     | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
| PSO1                                      | √                       | √   | √   |     | √   | √   | √   | √   | √   | √    |
| PSO2                                      | √                       | √   | √   | √   | √   |     | √   |     |     |      |
| PSO3                                      | √                       | √   | √   | √   | √   | √   | √   |     | √   | √    |
| PSO4                                      | √                       | √   |     | √   |     | √   |     | √   | √   | √    |
| PSO5                                      | √                       |     | √   | √   | √   | √   |     | √   |     |      |
| PSO6                                      | √                       |     | √   |     | √   | √   | √   | √   |     |      |
| PSO7                                      |                         |     | √   | √   |     |     | √   |     | √   | √    |
| PSO8                                      | √                       | √   |     |     | √   |     | √   |     | √   | √    |
| Number of matches = 54, Correlation: High |                         |     |     |     |     |     |     |     |     |      |

### MAPPING CORRELATION BENCHMARK

| Mapping     | 1-30% | 31-60%   | 61-70% | 71-100%   |
|-------------|-------|----------|--------|-----------|
| Matches     | 1-24  | 25-50    | 51-56  | 57-80     |
| Correlation | Poor  | Moderate | High   | Very High |

**COURSE STRUCTURE FOR M.Sc. BIOTECHNOLOGY**  
(For Students admitted from the academic year 2023-2024)

| Part                | Category                           | Course Code            | Course Title                                                                                            | Hrs./Week | Credit    | Exam. Hrs. | CIA        | ESE        | TOTAL      |
|---------------------|------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------|-----------|-----------|------------|------------|------------|------------|
| <b>SEMESTER I</b>   |                                    |                        |                                                                                                         |           |           |            |            |            |            |
| <b>I</b>            | Core Course I                      | PCBTTC11               | Biochemistry                                                                                            | 6         | 4         | 3          | 25         | 75         | 100        |
|                     | Core Course II                     | PCBTTC12               | Molecular Genetics                                                                                      | 6         | 4         | 3          | 25         | 75         | 100        |
|                     | Core Course III                    | PCBTTC13               | Molecular Cell Biology                                                                                  | 5         | 4         | 3          | 25         | 75         | 100        |
|                     | Core Course IV                     | PCBTTC11               | Practical I – Biochemistry, Molecular Genetics and Molecular Cell Biology                               | 5         | 4         | 3          | 25         | 75         | 100        |
|                     | Discipline Centric Elective I      | PCBTTE11/<br>PCBTTE12  | Bioinstrumentation / Human Physiology                                                                   | 4         | 2         | 3          | 25         | 75         | 100        |
|                     | Elective II                        | PCBTTE13/<br>PCBTTE14  | Enzymology/ Cancer Biology                                                                              | 4         | 2         | 3          | 25         | 75         | 100        |
|                     |                                    |                        | <b>TOTAL</b>                                                                                            | <b>30</b> | <b>20</b> | <b>-</b>   | <b>150</b> | <b>450</b> | <b>600</b> |
| <b>SEMESTER II</b>  |                                    |                        |                                                                                                         |           |           |            |            |            |            |
| <b>I</b>            | Core Course V                      | PCBTTC21               | Microbiology                                                                                            | 6         | 5         | 3          | 25         | 75         | 100        |
|                     | Core Course VI                     | PCBTTC22               | Plant and Animal Biotechnology                                                                          | 6         | 5         | 3          | 25         | 75         | 100        |
|                     | Core Course VII                    | PCBTTC21/<br>PCBTTC22/ | Genetic Engineering OR Practical II: Microbiology, Plant & Animal Biotechnology and Genetic Engineering | 6         | 4         | 3          | 25         | 75         | 100        |
|                     | Discipline Centric Elective III    | PCBTTE21/<br>PCBTTE22  | Regulatory affairs and Industrial standards /Pharmaceutical Biotechnology                               | 4         | 3         | 3          | 25         | 75         | 100        |
|                     | Elective IV                        | PCBTTE23/<br>PCBTTE24  | Environmental Biotechnology/ Medical Biotechnology                                                      | 4         | 3         | 3          | 25         | 75         | 100        |
| <b>II</b>           | Skill Enhancement Course I [NME I] | PCBTTS21               | Tissue Engineering                                                                                      | 4         | 2         | 3          | 25         | 75         | 100        |
|                     |                                    |                        | <b>TOTAL</b>                                                                                            | <b>30</b> | <b>22</b> | <b>-</b>   | <b>150</b> | <b>450</b> | <b>600</b> |
| <b>SEMESTER III</b> |                                    |                        |                                                                                                         |           |           |            |            |            |            |
| <b>I</b>            | Core Course VIII                   | PCBTTC31               | Bioinformatics                                                                                          | 6         | 5         | 3          | 25         | 75         | 100        |
|                     | Core Course IX                     | PCBTTC32               | Immunology                                                                                              | 6         | 5         | 3          | 25         | 75         | 100        |
|                     | Core Course X                      | PCBTTC33               | Bioprocess Technology                                                                                   | 6         | 4         | 3          | 25         | 75         | 100        |
|                     | Core Course XI                     | PCBTTC31               | Practical III: Bioinformatics, Immunology and Bioprocess Technology                                     | 4         | 4         | 3          | 25         | 75         | 100        |
|                     | Discipline Centric                 | PCBTTE31/              | Nano Biotechnology /                                                                                    | 4         | 3         | 3          | 25         | 75         | 100        |

|                    |                                                                                                                                          |                       |                                                                                       |            |           |          |            |             |             |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|------------|-----------|----------|------------|-------------|-------------|
|                    | Elective V                                                                                                                               | PCBTTE32              | Molecular Developmental Biology                                                       |            |           |          |            |             |             |
| II                 | Skill Enhancement Course II [NME II]                                                                                                     | PCBTTS31              | Gene manipulation Technology                                                          | 4          | 3         | 3        | 25         | 75          | 100         |
|                    | Internship                                                                                                                               | PCBTIM31              | Internship / Industrial Activity                                                      | -          | 2         | 3        | 25         | 75          | 100         |
|                    |                                                                                                                                          |                       | <b>TOTAL</b>                                                                          | <b>30</b>  | <b>26</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
| <b>SEMESTER IV</b> |                                                                                                                                          |                       |                                                                                       |            |           |          |            |             |             |
| I                  | Core Course XII                                                                                                                          | PCBTTC41              | Biostatistics                                                                         | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Core Course XIII                                                                                                                         | PCBTTC41/<br>PCBTTC42 | Ecology, Evolution and Biodiversity /Research Methodology and Biostatistics Practical | 6          | 4         | 3        | 25         | 75          | 100         |
|                    | Core Course XIV                                                                                                                          | PCBTJC41              | Project with Viva-voce                                                                | 6          | 5         | 3        | 25         | 75          | 100         |
|                    | Elective VI                                                                                                                              | PCBTTE41/<br>PCBTTE42 | Stem Cell Biology (or) Bioethics, Human Rights and Social Issues                      | 5          | 4         | 3        | 25         | 75          | 100         |
| II                 | Skill Enhancement Course III                                                                                                             | PCBTTS41              | Bio fertilizer technology                                                             | 5          | 3         | 3        | 25         | 75          | 100         |
|                    | Value Based Course [Online Exam]                                                                                                         | PCHROM41              | Human Rights                                                                          | 2          | 2         | 2        | 25         | 75          | 100         |
| III                | Extension Activity                                                                                                                       | PCEXAM41              | Extension Activity                                                                    | -          | 1         | 3        | 25         | 75          | 100         |
|                    | SWAYAM / NAAN MUDHALVAN/Online Spoken Tutorial by IIT Bombay – MOOC[ Mandatory Online Course to be eligible for obtaining the PG degree] |                       |                                                                                       |            |           |          |            |             |             |
|                    |                                                                                                                                          |                       | <b>TOTAL</b>                                                                          | <b>30</b>  | <b>23</b> | <b>-</b> | <b>175</b> | <b>525</b>  | <b>700</b>  |
|                    |                                                                                                                                          |                       | <b>Grand Total</b>                                                                    | <b>120</b> | <b>91</b> |          | <b>650</b> | <b>1950</b> | <b>2600</b> |

## **RESEARCH ACTIVITIES OF THE COLLEGE**

### **CENTRAL COUNCIL FOR RESEARCH UNANI MEDICINE, MINISTRY AYUSH, GOVERNMENT OF INDIA**

1. Approval of the Director General, CCRUM, New Delhi – Sanction and Release of Grant- Ongoing Research Project from 2022 onwards

| <b>S. No.</b> | <b>Principal Investigator</b>                                                                                    | <b>Title of the Project</b>                                                             | <b>Amount Sanctioned</b> |
|---------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------|
| 1             | Dr. M.P. Ashar Waheed<br>Assistant Professor of<br>Biochemistry<br>Islamiah College (Autonomous),<br>Vaniyambadi | Exploring the Anti-inflammatory<br>Mechanism of Action of Specific Unani<br>Formulation | 11,25,000/-              |

2. The Tamil Nadu State Council for Science and Technology has sanctioned a sum of Rupees 7500/- to Mr. M. Murugan and Mr. S. Karthick from the Department of Biochemistry for the student project entitled Identification of anemic in school adolescence girls treatment & highlighting possible prevention strategies under Student Project Scheme. The project was sanctioned under Dr. A. Gokulskrishnan, Assistant Professor and Head of the Department of Biochemistry, Islamiah College (Autonomous), Vaniyambadi.

## **COLLEGE JOURNAL**

1. International Journals of Science and Humanities, Vol. 8, No. 1 [January –June 2022], ISSN Print 2394 9236
2. International Journals of Science and Humanities, Vol. 8, No. 2 [July - December], ISSN Print 2394 9236

**REGULATIONS**  
**Value-Added SKILL DEVELOPMENT Certificate Courses**  
**(For the Candidates admitted from the academic year 2023 –2024)**

**1. ELIGIBILITY FOR ADMISSION**

A candidate who has passed the higher secondary examination and joined in any degree course in this College is eligible to undergo Certificate Programmes.

**2. DURATION OF THE COURSE**

The certificate course is for a period of one to three months. The course subject and practical will be conducted beyond the working hours of the College.

**3. COURSE OF STUDY**

This Programme is envisaged to provide flexibility in choosing the combination of subjects without any limitation, identifying the local need-based subjects, and entering the job market with gained skills in the respective discipline. The course of study consists of theory papers and practical/Project/fieldwork.

**4. SCHEME OF EXAMINATION**

| Srl. No | Course Code | Course Title                                                                                 | Duration of the Course (Month) | Exam. Hrs. | Credits | Marks |
|---------|-------------|----------------------------------------------------------------------------------------------|--------------------------------|------------|---------|-------|
| 1       | UBMSCC01    | Certificate Course in 'Bio-Statistics '                                                      | 3                              | 3          | 3       | 100   |
| 2       | UBPYCC01    | Certificate Course in 'Basic Electronics and Servicing of Home Appliances                    | 3                              | 3          | 3       | 100   |
| 3       | UBCHCC01    | Certificate Course in 'Preparation of Domestic Products'                                     | 3                              | 3          | 3       | 100   |
| 4       | UBCHCC02    | Certificate Course in 'Testing and Analysis of Industrial Products'                          | 3                              | 3          | 3       | 100   |
| 5       | UBCHCC03    | Certificate Course in 'Domestic and Laboratory Discharge water treatment method and process' | 3                              | 3          | 3       | 100   |
| 6       | UBBICC01    | Hands-on Training in 'Mushroom Cultivation'                                                  | 3                              | 3          | 3       | 100   |

|    |                 |                                                                                   |                    |   |   |     |
|----|-----------------|-----------------------------------------------------------------------------------|--------------------|---|---|-----|
| 7  | <b>UBBTCC01</b> | Certificate Course on <b>'Herbal Medicines'</b>                                   | 3                  | 3 | 3 | 100 |
| 8  | <b>UBCSCC01</b> | Certificate Course in <b>'Web Designing'</b>                                      | 3                  | 3 | 3 | 100 |
| 9  | <b>UBUACC01</b> | Certificate Course in <b>'Arabic'</b> offered by <b>NCPUL</b>                     | 3                  | 3 | 3 | 100 |
| 10 | <b>UBENCC01</b> | Certificate Course in <b>'Spoken English'</b>                                     | 3                  | 3 | 3 | 100 |
| 11 | <b>UBENCC02</b> | <b>Certificate Course in English for Budding Entrepreneurs"</b>                   | Five Week - online |   |   | 100 |
| 12 | <b>UBHICC01</b> | Certificate Course in <b>'Tourism &amp; Travel Management'</b>                    | 3                  | 3 | 3 | 100 |
| 13 | <b>UBCOCC01</b> | UGC Sponsored Certificate Course in <b>'E-Commerce &amp; Footwear Technology'</b> | 12                 | 3 | 5 | 100 |
| 14 | <b>UBCOCC02</b> | Certificate Course in <b>'Business Computer Applications'</b>                     | 3                  | 3 | 3 | 100 |
| 15 | <b>UBFACC01</b> | Certificate Course in <b>'Accounting Technician'</b> offered by <b>ICAI</b>       | 3                  | 3 | 3 | 100 |
| 16 | <b>UBBACC01</b> | Certificate Course in <b>'Stress Management Skills'</b>                           | 3                  | 3 | 3 | 100 |
| 17 | <b>UBCACC01</b> | Certificate Course in <b>'Online Trading of Securities'</b>                       | 3                  | 3 | 3 | 100 |
| 18 | <b>UBBTCC02</b> | Certificate Course in <b>Ornamental Fish Culture</b>                              | 3                  | 3 | 3 | 100 |
| 19 | <b>UBCSCC01</b> | Certificate Course in <b>"PC Assembly &amp; Maintenance"</b>                      | 3                  | 3 | 3 | 100 |
| 20 | <b>UBCSCC02</b> | <b>Certificate Course in Network Administration</b>                               | 3                  | 3 | 3 | 100 |

## 5. REQUIREMENTS TO TAKE THE EXAMINATION:

A candidate shall be permitted to take the examination provided he secures 75% attendance in both theory and practical classes and must complete the project work as prescribed.

## 6. PRACTICAL/PROJECT

Practical classes shall be designed in such a manner that a student acquires practical knowledge in handling, managing, and practicing the tools, materials, and equipment relating to the certificate courses. Project work will consist of an assignment in the subject area. Topics will be selected by the student and approved by the program coordinator.



## 7. MEDIUM OF INSTRUCTION

The medium of instruction and examination shall be English only.

## 8. PASSING MINIMUM

A candidate shall be declared to have passed the paper if he obtains a minimum of 40% of 100 marks (Theory + Practical/Projects).

| Course            | Maximum Marks |
|-------------------|---------------|
| Theory            | 75            |
| Practical/Project | 25            |
| Total             | 100           |

## 8. QUESTION PAPER PATTERN:

The question paper pattern for the course shall be as follows:

Section – A 10 Questions without the choice of 2 marks each ( $10 \times 2 = 20$ )

Section – B 5 out of 8 questions – 5 marks each ( $5 \times 5 = 25$ )

Section – C 3 out of 5 questions – 10 marks each ( $3 \times 10 = 30$ )

**REGULATIONS FOR  
UNIVERSITY GRANTS COMMISSION SPONSORED  
CAREER-ORIENTED CERTIFICATE COURSE  
IN E-COMMERCE AND FOOTWEAR TECHNOLOGY**

**Semester System with Credits with effect from the year 2013 – 2014 onwards**

**ELIGIBILITY FOR ADMISSION:**

Any student of the second and third-year undergraduate course

**DURATION OF THE COURSE:**

One academic year comprising ninety working days spread over two semesters of forty-five days each. Each semester shall have 120 hours, out of which 90 hours shall be for theory classes, and 10 hours each shall be allocated for practical classes, project work, and fieldwork.

**THE COURSE OF THE STUDY**

The course of study shall be under a semester pattern with credits. The course consists of one core paper, practical classes, project work, and fieldwork.

**REQUIREMENTS TO TAKE THE EXAMINATION:**

A candidate shall be permitted to take the examination provided they secure 75% attendance in both theory and practical classes and must complete project work and fieldwork as prescribed.

**PRACTICAL CLASSES:**

Practical classes shall be designed in such a manner that a student acquires practical knowledge in handling, managing, and practicing the tools and equipment relating to the orientation courses.

**PROJECT WORK:**

Project work will consist of small assignments in the subject area. Topics will be selected by the students and approved by the faculty.

**FIELDWORK:**

Fieldwork consists of industrial visits and observations designed to gain firsthand knowledge of the subject. It will be done either individually or in groups.

**MEDIUM OF INSTRUCTION AND EXAMINATION:**

The medium of instruction and examination of the candidate shall be English.

**MINIMUM PASS MARKS:**

A candidate shall be declared to have passed the paper if he obtains a minimum of 40 marks i.e. 25 from theory and 15 from practical and project work. The maximum and minimum marks for the course shall be as follows:

| Course       | Maximum Marks | Minimum Marks |
|--------------|---------------|---------------|
| Theory       | 75            | 25            |
| Practical    | 10            | 15            |
| Project      | 10            |               |
| Field Visits | 5             |               |
| <b>Total</b> | <b>100</b>    | <b>40</b>     |

**QUESTION PAPER PATTERN:**

The question paper pattern for the course shall be as follows:

**Section – A** [10 Questions without the choice of 2 marks each (10X2=20)]

**Section – B** [5 out of 8 questions – 5 marks each (5X5=25)]

**Section – C** [3 out of 5 questions – 10 marks each (3X10=30)]

**DEPARTMENT OF COMMERCE (FINANCE & ACCOUNTS)  
REGULATION FOR CAREER ORIENTED CERTIFICATE COURSE IN  
ACCOUNTING TECHNICIAN**

**ABOUT THE COURSE**

Career Oriented Certificate in Accounting Technician Course (CAT) Conducted by the Department of Commerce (Finance & Accounts) with the Collaboration of the Institute of Cost Accountants of India (ICAI), New Delhi.

**ELIGIBILITY CRITERIA**

A student who has passed the Class 10 examination conducted by an examining body constituted by the law of India or an examination recognized by the Central Government / State Government as equivalent thereto may register for the CAT Course and simultaneously study and appear for the Senior Secondary (10+2) Examination.

(Or)

Passed the Senior Secondary School Examination under the 10+2 scheme of a recognized Board or an Examination recognized by the Central Government as equivalent thereto or has passed the National Diploma in Commerce Examination or any State Board of Technical Education under the authority of the said All India Council (AIC), or the Diploma in Rural Service Examination conducted by the National Council of Higher Education.

Duration of the Course

CAT – Foundation Course (Entry-level) Part-I-200 Hours of Coaching and Self-Assessment – online/offline.

Duration of CAT-Competency Level – Part – 100 hours of Computer Training, Training on the filing of Returns, Cost Sheet preparation, and self-assessment – online/offline

**SUMMARY OF THE COURSE**

**Foundation Course (Entry Level) Part- I**

- Paper 1: Fundamentals of Financial Accounting
- Paper 2: Applied Business and Industrial Laws
- Paper 3: Financial Accounting – II
- Paper 4: Statutory Compliance

## **Competency Level – Part – II**

Fundamentals of Computers

Filling of Statutory Returns

Introduction to Costing principles and Preparation of Cost Statements

5 – days Orientation Programme

### **The pattern of the CAT Examination/Assessment Test**

#### **Examination Pattern for Foundation Course (Entry Level) Part –I**

The examination shall have Multiple Choice Questions to be answered online. The Examination of Foundation Course (Entry Level) Part- I shall be held on a single day in two sessions, Forenoon and Afternoon. The details of the papers covered in both the sessions would be:

#### **PAPER I (100 MARKS)**

Section A: Fundamentals of Financial Accounting (60 Marks)

Section B: Applied Business and Industrial Laws (40 Marks)

Total Questions: 100 (Multiple Choice Questions)

Maximum Marks: 100 (Each Question will carry 1 Mark)

There will be no negative marking for wrong answers

#### **PAPER II (100 MARKS)**

Section A: Financial Accounting- II (50 Marks)

Section B: Statutory Compliance (50 Marks)

Total Questions: 100 (Multiple Choice Questions)

Maximum Marks: 100 (Each Question will carry 1 Mark)

There will be no negative marking for wrong answers

### **STANDARD OF PASSING**

A candidate of the Foundation Course (Entry Level) Part- I Examination shall be declared to have passed the Examination if secures a minimum of 40% marks in each paper and an aggregate of 50% of total marks in the Foundation Course (Entry Level) part- I Examination.

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