

UNIVERSITY OF MUMBAI

CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)

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Providing Higher Education through Distance mode since 1971

55 successful years in Open and Distance Education

Prospectus 2026-27

Website : <https://cdoe.uom.edu.in/>

<https://mucdoeadm.samarth.edu.in>

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SECTION-ONE

1.1 THE UNIVERSITY OF MUMBAI:

The University of Mumbai (earlier known as University of Bombay) is one of the oldest and premier Universities in India. Established on 18th July, 1857, it is one amongst the first three universities in India, other being Calcutta and Madras universities. It is a University with Potential for Excellence Award accorded by the UGC.

The University has been reaccredited with 'A++' with (CGPA 3.65) by NAAC.

In addition, UGC has granted Category I Status to the University of Mumbai.

University of Mumbai has seven campuses along with the headquarter there are six sub campuses (i.e. Fort campus (Headquarter), Churchgate, Kalina, Thane, Kalyan, Ratnagiri, and Sawantwadi). Around 900 affiliated colleges and 56 departments with an enrolment of more than 8 lakh Students are engaged in the teaching-learning process. It has established its name in industrial collaboration and runs various professional programmes. The university is leading at national level in sports, cultural and other activities.

1.2 ABOUT THE CDOE:

The university started its correspondence education on 24th March 1971. It was known as "Directorate of Correspondence Programmes." In 1985 it was upgraded as "Directorate of Distance Education" which was further in 1993, upgraded as "Institute of Distance Education" (IDE). In the academic year 2008-09 the "The Institute of Distance and Open Learning" (IDOL) is now as per ODL regulation 2020 it is named as "**CENTRE FOR DISTANCE AND ONLINE EDUCATION**" (CDOE) in February 2024. Since its inception CDOE has been giving high priority to human resource development by introducing various traditional Degree Programmes as well as Technical and Professional Programmes through distance and online mode.

University of Mumbai is the 7th University in the country which has started a Distance Education Program in a conventional set up. Initially it started with the registration of 845 students which has grown up to a staggering figure of 76,495 (2016-2017) in the last academic year. Students are also doing well by topping the merit list of the university examination and have bagged Gold Medal in M.A. Sanskrit, M.A. Marathi and Chancellor's Medal in M.A. Hindi. There are a good number of students securing First-class B.A./B.Com. and M.A. / M.Com. Many students of CDOE have gone

abroad seeking higher education in the USA, UK, Australia, Canada, New Zealand etc. Many well-known film personalities have also been enrolled in CDOE.

All programs offered by the Institute under the Faculty of Humanities and Interdisciplinary Studies are approved by the University Grant Commission- Distance Education Bureau (UGC-DEB), New Delhi, vide letter F. No. 1-11/2019 (DEB-I) dated 31/07/2019.

As per ODL regulation CDOE is operating in three - tier system as follows:

1. Headquarter
2. Regional Centers
3. Learner Support Centers (LSC)

Headquarter, Dr. Shankar Dayal Sharma Bhavan, Vidyanagari Campus, University of Mumbai, Santacruz (East), Mumbai, 400098

CDOE Regional Centers:

- 1. Vidyapeeth Vidyarthi Bhavan, B Road, Churchgate, Mumbai.**
- 2. Thane Sub Campus: University of Mumbai at Balkum, Runwal Garden, Thane-Bhiwandi Road, Balkum Octroi Naka, Thane – 400 608. Student counselling/guidance is available at this centre.**
- 3. Kalyan Sub Campus: At Gandhari Village, Vasant Valley Road, Khadakpada, Kalyan (W).**
- 4. Ratnagiri Sub Campus: University of Mumbai at Plot No. P-61, MIDC, Mirjole, Ratnagiri. Student counselling/guidance is available at this centre.**
- 5. Sawantwadi Regional Centre, Sawantwadi, Dist. Sindhudurg.**
- 6. Palghar Regional Centre, - Sonopant Dandekar Shikshan Mandali College, Palghar**

In order to create multimedia learning material, CDOE has created an independent unit named Center for Excellence in E-content Development (CEED).

The Center for Excellence in E-Content Development (CEED)

The Center for Excellence in E-Content Development (CEED), was inaugurated on 17th November 2023 in the presence of Hon'ble Minister Higher and Technical Education, Shri Chandrakant Patil. It operates from the Centre for Distance and Online Education, University of Mumbai, to create learner-centered 4 - Quadrant e-content as per UGC SWAYAM MOOCs guidelines for various courses. It is located in Room Number 204, CDOE building, University of Mumbai.

1.3 AIMS AND OBJECTIVES:

The main objectives of the Institute are:

- 1. To provide facilities of higher education to the working population, women and adults, who wish to upgrade their education or acquire knowledge in various disciplines.**
- 2. To provide education to people who cannot attend regular face to face classroom teaching.**
- 3. To help the students upgrade educational qualification for academic achievements in the process of lifelong education.**
- 4. To develop education as a lifelong activity so that the individual can refresh his/her knowledge or can acquire knowledge in new areas.**
- 5. To provide online education to learners as per UGC-DEB regulation 2020.**

Vision:

To position CDOE as a premier ODL institute responsive to emerging needs of learners by providing education for all. To produce high quality graduates and contribute towards sustainable development of the university by supporting creation of excellence in teaching, learning and research.

Mission:

The institute shall strive to promote innovative strategies for creation and dissemination of knowledge using available media and technologies so that university graduates acquire relevant capabilities to contribute with diligence to national development and global knowledge pool through their caliber, professionalism, value system and sense of service. This will be achieved by providing high quality self-learning materials with extensive learner support services and to take education to the needy and promote community participation for local development.

1.4 SPECIAL FEATURES:

- * The institute is presently located in its own building of about 77,000 square feet area with connectivity.
- * Curricular contents, mode of examination and the degrees to be awarded are the same as applicable to the students of the colleges affiliated to the University of Mumbai.
- * The learning process of the Institute is mainly through the medium of printed study materials.
- * The audio-visual and electronic aids are being added in some subjects as a reference resource.
- * The institute is also developing the Virtual Learning Class-rooms (VLC) facility for the students as an additional facility.
- * The institute has an independent library and two reading rooms for the students. Fifty thousand books are available with a good number of journals of national and international repute.
- * Guidance lectures (Personal Contact Sessions) are conducted every year at about 76 centres in Mumbai and around.
- * Counselling to the students during office hours at Headquarters is given by the core faculty.

NEP-2020

The National Education Policy 2020 envisions an education system rooted in Indian ethos that

contributes directly to transforming India, that is Bharat, sustainably into an equitable and vibrant knowledge society, by providing high-quality education to all, and thereby making India a global knowledge superpower. The Policy envisages that the curriculum and pedagogy of our institutions must develop among the students a deep sense of respect towards the Fundamental Duties and Constitutional values, bonding with one's country, and a conscious awareness of one's roles and responsibilities in a changing world. The vision of the Policy is to instill among the learners a deep-rooted pride in being Indian, not only in thought, but also in spirit, intellect, and deeds, as well as to develop knowledge, skills, values, and dispositions that support responsible commitment to human rights, sustainable development and living, and global well-being, thereby reflecting a truly global citizen. Therefore, the Centre for Distance and Online Education, University of Mumbai, has implemented National Education Policy (NEP 2020) for Post-graduation programmes for the academic year 2024-25 and from the Academic Year 2025-26, it will be implemented for Undergraduate courses

1.5 INSTRUCTIONAL SYSTEM:

The methodology of instructions at the Centre for Distance and Online Education of the University Of Mumbai is different from that of the conventional university/college. Our system is more learner oriented in which the learner is an active participant in the teaching learning process.

CDOE follows the multimedia approach in instructions. It comprises

1. Printed study materials are basically in English and wherever possible in Marathi also. The question-papers in the subject other than languages are printed in English with a Marathi version. The students can write their answers in English, Marathi, Hindi or Gujarati if they indicate their choice for medium of answering in their Examination Form, if a student writes his /her answers in any language other than Marathi, Hindi, English and Gujarati, their answers will not be assessed and ZERO marks will be awarded. Students will have to collect their study materials from Room No.005 (Backside), ground floor, CDOE Building on Monday to Friday (11.00a.m. to 5:00p.m.). However, for the students who are unable to make it, they can download the study material from the official website. (<https://cdoe.uom.edu.in/>)
2. Face to face interaction with teachers and Counseling at CDOE by the core faculty is available between the times 3.00 p.m. to 5.00 p.m. from Monday to Saturday (excluding 2nd & 4th Saturday of every month and public holidays) in Room No. 305 and 107, CDOE building, University of Mumbai

1.6 Office Bearers

	Director	Prof. (Dr.) Shivaji D. Sargar M.A. M.Phil, Ph.D, SET, English literature, Director, CDOE
	Deputy Director	Dr. Pooja More Ph.D. in Instrumentation /Electronics Deputy Director, CDOE
	Deputy Registrar	Dr. Leeladhar V. Bansod Public Relation Officer (PRO)
	Deputy Registrar (Exam & Admin)	Neelkanth Talwadekar Deputy Registrar

2. ADMISSION

2.1. ADMISSION SCHEDULE

Kindly check the admission schedule on the website <https://cdoe.uom.edu.in/>

2.2 ONLINE ADMISSION PROCEDURE:

Admissions to all programmes are done through an online process. For details the students have to visit our website:

Official website-Students are requested to follow only the official website for all the notices related to Examination & Admission and other important updates	https://cdoe.uom.edu.in/
Website for admission in First & Second Year Under graduate programmes & Part I & II Post graduate Programmes For students taking admission in (NEP) Scheme	https://mucdoeadm.samarth.edu.in/
Website for admission in Third Year Under graduate programmes For students taking admission in (CBCS) Scheme	https://idoloa.digitaluniversity.ac/

The Flowchart for Admission procedure, Creation of ABC ID, DEB ID will be made available during the online admission process. It is COMPULSORY to have ABC ID and DEB ID for the confirmation of admission. Use your OWN email address and Contact number to avoid any communication gaps.

PAYMENT OF FEES

The fees can be paid through any one of the following modes of payment: 1. online payment option through Debit/ Credit Cards/ Internet Banking. Attestation of Documents

The self-attested copies of documents/papers will be accepted. It is made clear that if any false attestation / falsified record is detected, the student will be debarred from the University / institute and in addition a criminal case under relevant section of IPC (viz., 471, 474 IPC etc.) will be instituted against him/her

2.3. COURSES OFFERED UNDER SCIENCE FACULTY AND ELIGIBILITY CRITERIA

AT A GLANCE

Sr. No.	Course & Eligibility	
1.	B. Sc. [Information Technology] (Three Years)	
	F.Y. B. Sc. (IT) AS PER NEP 2020	10+2 (A learner must have completed HSC or equivalent with 45% of aggregate for open category and 40% of aggregate in case of reserved candidates in one attempt with Mathematics and/or Statistics as one of the subjects (OR) Passed Equivalent Academic Level 4.0 with CGPA equivalent to 45% for open category and 40% in case of reserved candidates with Mathematics and/or Statistics as one of the subjects
	S.Y. B. Sc. (IT) AS PER NEP 2020	https://drive.google.com/file/d/1sC3jFSpEEExTkCw22YSHECxxCMOWvL_R/view OR https://drive.google.com/file/d/1OaPo4uqiWtqVqmxpVG9bZyPz2X39xIH8/view
	T.Y. B. Sc. (IT) (CBCS)	Passed in all subjects of F. Y. & S.Y. B. Sc. (IT) or equivalent examination of other universities. Students should have passed in all subjects of FY B. Sc. (IT) and failed not more than 200 marks in SY B.Sc. (IT) from University of Mumbai. No. UG/235 of 2005. A student is eligible for admission to Semester V if either the student passes Semester III & IV. OR The student fails in a combination of Theory and / or practical taken in Semester III or Semester IV or together, where the total marks does not exceed 200. OR A student is eligible to be admitted to Semester VI irrespective of no. of heads of failure in the fifth Semester. The results of Semester VI should be kept in abeyance until the students clears Semesters III, IV and V in full.
2.	B. Sc. [Computer Science] (Three Years)	
	F.Y. B. Sc. (CS) AS PER NEP 2020	A candidate for being eligible for admission must have passed Higher Secondary School Certificate Examination (Std. XII) in Science stream conducted by the Maharashtra State Board of Secondary and Higher Secondary Education with Mathematics and Statistics as one of the subject or its equivalent. Admission will be on merit, based on order of preference as follows: 1. Aggregate Marks at H.S.C. or equivalent. 2. Aggregate Marks in Science Group (Physics, Chemistry and Mathematics) 3. Marks in Mathematics and Statistics and Physics. Marks in Mathematics and Statistics. OR Passed Equivalent Academic Level 4.0 with Mathematics and Statistics as one of the subject
	S.Y. B. Sc. (CS) AS PER NEP 2020	https://drive.google.com/file/d/1sC3jFSpEEExTkCw22YSHECxxCMOWvL_R/view OR https://drive.google.com/file/d/1OaPo4uqiWtqVqmxpVG9bZyPz2X39xIH8/view

	T.Y. B. Sc. (CS) (CBCS)	Passed in all subjects of F. Y. & S.Y. B. Sc. (CS) or equivalent examination of other universities. Students should have passed in all subjects of FY B. Sc. (CS) and failed not more than 200 marks in SY B.Sc. (CS) from University of Mumbai. No. UG/235 of 2005. A student is eligible for admission to Semester V if either the student passes Semester III & IV. OR The student fails in a combination of Theory and / or practical taken in Semester III or Semester IV or together, where the total marks does not exceed 200. OR A student is eligible to be admitted to Semester VI irrespective of no. of heads of failure in the fifth Semester. The results of Semester VI should be kept in abeyance until the students clears Semesters III, IV and V in full.						
3.	M. Sc. [Mathematics] (Two Year/4 Semesters from 2020-21)							
	Part – I	BSc (with 42 credits of Maths), BE/BTech (with minimum 20 credits of Maths, Stats, OR, AI, ML) are eligible OR passed equivalent academic level 5.5						
	Part – I	Kindly click the link given below for eligibility of Admission. https://drive.google.com/file/d/1eShJojZJSEeeD2PJ8KPh9Of6RGdvoMiM/view						
4.	M. Sc. [Information Technology] (Two Year)							
	Part – I	Must have PASSED B. Sc. with IT/ Comp. Sc./ Maths/ Physics/ Statistics/ Electronics or BCS or BE (in any branch), BCA (As per the Circular No. UG/67 of 2016/17) and (Ordinance No. 6302 & 6303)						
	Part II	Kindly click the link given below for eligibility of Admission. https://drive.google.com/file/d/1eShJojZJSEeeD2PJ8KPh9Of6RGdvoMiM/view						
5	M. Sc. [Computer Science] [AS PER NEP 2020] (Two Year)							
	Part-I	The Bachelor's degree in the Faculty of Science/ Technology of this University or equivalent degree of recognized Universities with Major and Ancillary Subjects at undergraduate level as detailed below: <table><tr><th>MAJOR</th><th>ANCILLARY</th></tr><tr><td>Mathematics</td><td>-</td></tr><tr><td>Physics</td><td>Mathematics (4 Units)</td></tr></table>	MAJOR	ANCILLARY	Mathematics	-	Physics	Mathematics (4 Units)
MAJOR	ANCILLARY							
Mathematics	-							
Physics	Mathematics (4 Units)							

		<table><tr><td>Statistics</td><td>Mathematics (4 Units)</td></tr><tr><td>Life Sciences</td><td>Biochemistry or Chemistry with Mathematics or Statistics in first and second year OR Computer Sciences OR Information Technology up to second year of Bachelor's Degree</td></tr><tr><td>Medicine</td><td>Chemistry/ Microbiology</td></tr><tr><td>Bachelor's Degree in Technology (B.Tech./B.E.) in Engineering/ Computer Sciences/ Information Technology</td><td>-</td></tr><tr><td>Bachelor's Degree in Computer Sciences B.C.A/B.C.S/ Information Technology</td><td></td></tr></table>	Statistics	Mathematics (4 Units)	Life Sciences	Biochemistry or Chemistry with Mathematics or Statistics in first and second year OR Computer Sciences OR Information Technology up to second year of Bachelor's Degree	Medicine	Chemistry/ Microbiology	Bachelor's Degree in Technology (B.Tech./B.E.) in Engineering/ Computer Sciences/ Information Technology	-	Bachelor's Degree in Computer Sciences B.C.A/B.C.S/ Information Technology	
Statistics	Mathematics (4 Units)											
Life Sciences	Biochemistry or Chemistry with Mathematics or Statistics in first and second year OR Computer Sciences OR Information Technology up to second year of Bachelor's Degree											
Medicine	Chemistry/ Microbiology											
Bachelor's Degree in Technology (B.Tech./B.E.) in Engineering/ Computer Sciences/ Information Technology	-											
Bachelor's Degree in Computer Sciences B.C.A/B.C.S/ Information Technology												
	Part-II	Kindly click the link given below for eligibility of Admission. https://drive.google.com/file/d/1eShJojZJSEeeD2PJ8KPh9Of6RGdvoMiM/view										
	M.C.A First Year	O.2646 :- Passed B.Sc. I.T, BCA, B. Sc. Comp. Sc. or Bachelor degree in computer science engineering or equivalent Degree and obtained at least 50% Marks in aggregate 3/4 years (at least 45% in case of candidates of Backward Class Categories, Economically Weaker Section (EWS) and Persons with Disability belonging to Maharashtra State only)										

		OR Passed B.Sc./B. Com/B.A. with Mathematics 10+2 level or at Graduate level (with additional bridge courses as per the norms of the University/AICTE) and obtained at least 50% marks aggregate (at least 45% in case of candidates of Backward Class Categories, Economically Weaker Section (EWS) and Persons with Disability belonging to Maharashtra State only) These students has to appear for the Bridge course examination during the first year. (As per the No. UG/87of 2021)
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2.4 COURSE WISE FEES

Sr. No.	Course	Fees	
		Fees for General Category	Fees for Reserve category

1.	B.Sc. (I. T.) (Three Years)	F.Y.B.Sc. (I. T.) AS PER NEP 2020	19866/-	4629/-
		S.Y.B.Sc. (I. T.) AS PER NEP 2020	20146/-	5109/-
		T.Y.B.Sc. (I. T.) (CBCS)	21396/-	6359/-
2.	B.Sc. (Computer Science) (Three Years)	F.Y.B.Sc. (Computer Science) AS PER NEP 2020	18135/-	4629/-
		S.Y.B.Sc. (Computer Science) AS PER NEP 2020	20761/-	4609/-
		T.Y.B.Sc. (Computer Science)(CBCS)	23657/-	4859/-
3.	M.Sc. (Mathematics)	Part-I AS PER NEP 2020	9584/-	5014/-
		Part – II AS PER NEP 2020	8809/-	5264/-
4	M.Sc. (Computer Science) (Two Years)	Part-I AS PER NEP 2020	16084/-	5514/-
		Part - II AS PER NEP 2020	15306/-	5764/-
5.	M.Sc. (Information Technology)	Part-I AS PER NEP 2020	16084/-	5514/-
		Part - II AS PER NEP 2020	15309/-	5764/-
6.	M.C.A.(Master of Computer Application)	First Year AS PER NEP 2020	21334/-	N.A
		Second Year AS PER NEP 2020	21882/-	N.A

SECTION-TWO

3. DETAILS OF PROGRAMMES IN FACULTY OF SCIENCE

3.1 B.Sc. COMPUTER SCIENCE

- **Introduction :**

In line with the National Education Policy (NEP) 2020, our revised Computer Science program is designed to instill in students the ability to navigate the ever-changing technological terrain. Recognizing that specific languages and platforms may undergo transformations, the curriculum places a strong emphasis on fostering adaptability. Students will not only be exposed to a diverse array of programming languages, tools, paradigms, and technologies but will also delve into the fundamental principles that underpin the realm of computer science.

- **Aims and Objectives:**

Core Knowledge: Build a solid foundation in Computer Science theories, systems, and practical applications.

Problem Solving: Develop analytical and critical thinking skills to solve real-world problems using computational tools.

Emerging Technologies: Train in cutting-edge computing technologies to foster innovation in industry and academia.

Postgraduate Preparation: Equip students with the skills and knowledge for advanced studies and lifelong learning in CS.

Professional Skills: Prepare students for IT careers with practical experience, ethical awareness, and industry-relevant tools.

Independent & Team Work: Promote effective communication, independent thinking, and collaboration for confident tech use.

- **Learning Outcomes**

At the end of three year Bachelor of Computer Science the students will be able:

Solution Design: Formulate and model effective software-based solutions for real-world problems.

Programming & Systems: Develop programs and systems in areas like networking, web, security, cloud, IoT, and data science.

Innovation & Trends: Stay updated with industry/research trends to create innovative solutions.

Theoretical Application: Apply CS principles to new and complex situations.

Technical Proficiency: Use current tools and techniques essential for modern computing.

Software Engineering: Implement standard practices in real-time software development.

Higher Studies & Careers: Prepare for advanced education or technical roles with confidence.

Teamwork: Collaborate effectively on large projects with strong project management skills.

Communication: Present ideas clearly in both oral and written formats.

Ethics: Practice responsible and ethical computing.

Lifelong Learning: Continuously adapt and learn in a fast-evolving tech landscape.

F.Y.B.Sc (Computer Science) : AS PER NEP 2020

Syllabus for Semester – I & II Ref: GR dated 20th April, 2023 for Credit Structure of UG (With effect from the academic year 2025-26 progressively)

B.Sc (Computer Science) NEP 2020 Semester I			
Sr. No	Component	Subject	Total Credits
1	Major	Digital Systems & Architecture	2
2	Major	Fundamentals of Database Systems	2
3	OE 1	English Grammar for Competitive Examinations-I	2
4	OE 2	Introduction to Environment	2
5	VEC	Indian Constitution	2
6	AEC	Introduction to Communication Skills in English I	2
7	IKS	Indian Knowledge System	2
8	CC	Extension Work Sem -I	2
9	Major P	Computer Science Practical 1	2
10	VSC P	Introduction to Programming with Python	2
11	SEC P	Linux Operating System	2
			22

B.Sc (Computer Science) (NEP 2020) Semester II			
No	Component	Subject	Total Credits
1	Major	Design and Analysis of Algorithms	2
2	Major	Object Oriented Programming using C++	2
3	OE 1	English Grammar for Competitive Examinations-II	2
4	OE 2	Environmental Issues and Management	2
5	VEC	Universal Human Values	2
6	AEC	लेखन कौशल्ये १ (कार्यालयीन लेखन व्यवहार व पत्रव्यवहार) (मराठी) OR हिंदी भाषा – कौशल के आधार	2
7	CC	Extension Work	2
8	Major P	Computer Science - 2	2
9	VSC P	Web Technologies	2
10	SEC P	Advanced Python Programming	2
11	Minor	Programming with Python	2
			22

Question Paper Pattern:

THEORY:

Internal Continuous Assessment: 40%	Semester End Examination: 60%		
Continuous Evaluation through: Class Test on Module 1: 10 marks Class Test on Module 2: 10 marks Average of 2 Class Tests: 10 marks Assignment on Module 1: 5 marks Assignment on Module 2: 5 marks Total of 2 Assignments: 10 marks Total: 20 marks	Evaluation through: A Semester End Theory Examination of 1 hour duration for 30 marks as per the paper pattern given below. Total: 30 marks		
Format of Question Paper:			
Total Marks: 30			
Duration: 1 Hour			
Question	Based On	Options	Marks
Q. 1	Module 1	<i>Any 2 out of 4</i>	10
Q. 2	Module 2	<i>Any 2 out of 4</i>	10
Q. 3	Module 1 & 2	<i>Any 2 out of 4</i>	10

PRACTICAL:

Internal Continuous Assessment: 40%	Semester End Examination: 60%	
The internal evaluation will be determined by the completion of practical tasks and the submission of corresponding write-ups for each session. Each practical exercise holds a maximum value of 5 marks. The total evaluation, out of 100 marks, should be scaled down to a final score of 20 marks.	A Semester End Practical Examination of 2 hours duration for 30 marks as per the paper pattern given below.	
	Certified Journal is compulsory for appearing at the time of Practical Exam	
Total: 20 marks	Total: 30 Marks	
Format of Question Paper:		
Total Marks: 30		
Duration: 2 Hours		
Question	Practical Question Based On	Marks
Q. 1	Module 1	12
Q. 2	Module 2	12
Q. 3	Viva	06

Examination and Standard of Passing:

NOTE: **As per UGC-DEB regulations, for distance learning programs the examination pattern has been decided to be in 70:30 ratio.**

Regulations regarding the scheme of exams, number of credits and standard of passing will be as prescribed by the University of Mumbai. A student is said to have passed if he/she secures 40% of marks allotted in each head of passing. External evaluation of 30 marks and Internal evaluation of 20 marks are treated as separate heads of passing.

The Ten Point Grading System prescribed by the University of Mumbai will be as follows:

Letter Grades and Grade Points

Semester GPA/ Program CGPA Semester/ Program	% of Marks	Alpha-Sign / Letter Grade/Result	Grade Points
9.00-10.00	90.0-100	O (Outstanding)	10
8.00-<9.00	80.0-<90.0	A+ (Excellent)	9
7.00-<8.00	70.0-<80.0	A (Very Good)	8
6.00-<7.00	60.0-<70.0	B+ (Good)	7
5.50-<6.00	55.0-<60.0	B (Above Average)	6
5.00-<5.50	50.0-<55.0	C (Average)	5
4.00-<5.00	40.0-<50.0	P (Pass)	4
Below 4.00	Below 40	F (Fail)	0
Ab (Absent)	-	Absent	0

S.Y.B.Sc. COMPUTER SCIENCE: [AS PER NEP 2020]

B.Sc (Computer Science) (NEP 2020) Semester III			
No	Component	Subject	Total Credits
1	Major	Principles of Operating Systems	2
2	Major	Theory of Computation	2
3	Major	Data Structures	2
4	Major	Computer Science Practical 3	2
5	Minor	Vector Spaces	2
6	Minor	PM-3B Vector Spaces	2
7	OE	Cyber Security	2
8	VSC	Java Programming	2
9	AEC	भाषांतर कौशल्ये	2
10	FP	field project	2
11	CC	Indian Theatre: Classical Roots and Contemporary Expressions	2

B.Sc (Computer Science) (NEP 2020) Semester IV			
No	Component	Subject	Total Credits
1	Major	Computer Networks	2
2	Major	Software Engineering	2
3	Major	IoT Technologies	2
4	Major	Computer Science Practical 4	2
5	Minor	Linear Algebra	2
6	Minor	PM-4B Linear Algebra	2
7	OE	Web Development (Technology)	2
8	SEC	Mobile Application Development	2

9	AEC	Introduction to Communication Skills in English II (B.Sc)	2
10	CEP	Community Engagement Project	2
11	CC	Integrated Theatre Production: Stage Craft, Costume, Music and Technology	2
			22

T.Y.B.Sc. COMPUTER SCIENCE (CBCS - Semester Pattern with 75:25 Scheme of examination, circular no. UG/107 of 2017) (**Study Material Available**)

SEMESTER V			
Course	TOPICS	Credits	L / Week
	Elective-I (Select Any Two)		
USCS501	Artificial Intelligence	3	3
USCS502	Linux Server Administration	3	3
USCS503	Software Testing and Quality Assurance	3	3
	Elective-II (Select Any Two)		
USCS504	Information and Network Security	3	3
USCS505	Architecting of IoT	3	3
USCS506	Web Services	3	3
	Skill Enhancement		
USCS507	Game Programming	2	3
	Practical		
USCSP501	Practical of Elective-I	2	6
USCSP502	Practical of Elective-II	2	6
USCSP503	Project Implementation	1	3
USCSP504	Practical of Skill Enhancement : USCS507	1	3

SEMESTER VI			
Course	TOPICS	Credits	L / Week
	Elective-I (Select Any Two)		
USCS601	Wireless Sensor Networks and Mobile Communication	3	3
USCS602	Cloud Computing	3	3
USCS603	Cyber Forensics	3	3
	Elective-II (Select Any Two)		
USCS604	Information Retrieval	3	3
USCS605	Digital Image Processing	3	3
USCS606	Data Science	3	3
	Skill Enhancement		
USCS607	Ethical Hacking	2	3
	Practical		
USCSP601	Practical of Elective-I	2	6
USCSP602	Practical of Elective-II	2	6
USCSP603	Project Implementation	1	3
USCSP604	Practical of Skill Enhancement : USCS607	1	3

3.2 B.Sc. INFORMATION TECHNOLOGY

- **Introduction:**

The aims and objectives of a Bachelor of Science (B.Sc) program in Information Technology (IT) generally revolve around providing students with a comprehensive understanding of the principles, technologies, and applications within the field of information technology. The entire program collectively aim to produce graduates who are well-rounded IT professionals, capable of contributing to the design, development, and management of information technology systems in various industries. The specific details of the curriculum may vary among institutions offering B.Sc in Information Technology programs.

- **Aims and Objectives:**

The aims and objectives of a Bachelor of Science (B.Sc) program in Information Technology (IT) generally revolve around providing students with a comprehensive understanding of the principles, technologies, and applications within the field of information technology. The entire program collectively aim to produce graduates who are well-rounded IT professionals, capable of contributing to the design, development, and management of information technology systems in various industries. The specific details of the curriculum may vary among institutions offering B.Sc in Information Technology programs.

- **Learning Outcomes:**

The B. Sc. (Information Technology) Programme shall prepare and enable the graduates to: Demonstrate proficiency in programming languages, Data structures, Design and implement software solutions with their technical competence Analyze user requirements and design effective IT systems or applications. Apply system analysis and design methodologies to address complex business challenges. Acquire the skills of Database Management, Networking and Security, Web Technologies Plan, execute, monitor, and control IT projects. Analyze and solve complex IT problems using critical thinking skills. Apply concepts of artificial intelligence, machine learning, cloud computing, and IoT Effectively communicate technical information both orally and in writing.

F.Y.B.Sc (Information Technology) : AS PER NEP 2020

Syllabus for Semester – Sem I & II Ref: GR dated 20th April, 2023 for Credit Structure of UG (With effect from the academic year 2025-26 Progressively)

BSC IT NEP Semester I			
Sr. No	Component	Subject	Total Credits
1	Major	Program ming with C	2
2	Major	Database Management Systems	2
3	OE 1	English Grammar for Competitive Examinations-1	2
4	OE 2	Introduction to Environment	2
5	VEC	Indian Constitution	2
6	AEC	Introduction to Communication Skills in English I	2
7	IKS	Indian Knowledge System	2
8	CC	Extension Work Sem -I	2
9	Major P	Practical 1	2
10	VSC P	Combinational and Sequential Design	2
11	SEC P	Office Tools for Data Management	2
Total Credits			22

BSC IT NEP Semester II			
Sr. No	Component	Subject	Total Credits
1	Major	OOPs with C++	2
2	Major	Web Designing	2
3	OE 1	English Grammar for Competitive Examinations-II	2
4	OE 2	Environmental Issues and Management	2
5	VEC	Universal Human Values	2
6	AEC	लेखन कौशल्ये १ (कार्यालयीन लेखन व्यवहार व पत्रव्यवहार) (मराठी) Or हिंदी भाषा – कौशल के आधार	2
7	CC	Extension Work	2
8	Major P	Practical - II	2
9	VSC P	Assembly Language Programming	2
10	SEC P	Web Programming	2
11	Minor	IT Fundamentals of Python Programming	2
Total Credits			22

Paper Pattern: Theory and Practicals

QUESTION PAPER PATTERN

(External and Internal)

I	A Theory of 2 credits is evaluated for a total of 50 Marks	
	Internal Continuous Assessment:	40%[20 Marks]
	Continuous Evaluation through: Class test of 1 of 15 marks Class test of 2 of 15 marks Average of the two: 15 marks Quizzes/ Presentations/ Assignments: 5 marks Total: 20 marks	
	External Semester End Examination: 60%[30 Marks]	
	Format of Question Paper: (Semester End Examination : 30 Marks. Duration:1 hour) Q1: Attempt any two (out of four) from Module 1 (15 marks) Q2: Attempt any two (out of four) from Module 2 (15 marks)	
II	A Practical of 2 credits is evaluated for a total of 50 Marks	
	Internal Continuous Assessment:	40%[20 Mrks]
	Continuous Evaluation through: Students are expected to attend each practical and submit the written practical of the previous session. Performing Practical and writeup submission will be continuous internal evaluation. 2.5 marks can be awarded for each practical performance and writeup submission totalling to 50 marks and can be converted to 20 marks.	
	Semester End Examination: 60%[30 Marks]	
	Format of Question Paper: Duration 2 hours. Certified copy of Journal is compulsory to appear for the practical examination(30 Marks) Practical Slip: Q1. From Module 1 13 marks Q2. From Module 2 12marks Q3. Journal and Viva 05 marks	

Examination and Standard of Passing:

NOTE: **As per UGC-DEB regulations, for distance learning programs the examination pattern has been decided to be in 70:30 ratio.**

Regulations regarding the scheme of exams, number of credits and standard of passing will be as prescribed by the University of Mumbai. A student is said to have passed if he/she secures 40% of marks allotted in each head of passing. External evaluation of 30 marks and Internal evaluation of 20 marks are treated as separate heads of passing.

The Ten Point Grading System prescribed by the University of Mumbai will be as follows:

Letter Grades and Grade Points

Semester GPA/ Program CGPA Semester/ Program	% of Marks	Alpha-Sign / Letter Grade/Result	Grade Points
9.00-10.00	90.0-100	O (Outstanding)	10
8.00-<9.00	80.0-<90.0	A+ (Excellent)	9
7.00-<8.00	70.0-<80.0	A (Very Good)	8
6.00-<7.00	60.0-<70.0	B+ (Good)	7
5.50-<6.00	55.0-<60.0	B (Above Average)	6
5.00-<5.50	50.0-<55.0	C (Average)	5
4.00-<5.00	40.0-<50.0	P (Pass)	4
Below 4.00	Below 40	F (Fail)	0
Ab (Absent)	-	Absent	0

Photo & Signature has to be scan & upload during the Registration process

A. First Year B.Sc.I.T (NEP-2020) – Maharashtra Board Students

1. HSC Mark Sheet
2. Birth Proof

B. Second Year B.Sc.I.T. (NEP-2020) – Students from University of Mumbai Affiliated Colleges

1. FY mark sheets (all attempts/semester-wise mark sheets, if applicable)
2. Current Year NOC with PNR number from the last attended college
3. Marriage Certificate / Gazette Notification (if applicable for name change)
4. Transfer Certificate Application Form to be submitted to the previous college after admission

C. Third Year B.Sc.I.T. For Students from University Affiliated Colleges:

1. FY & SY mark sheets (all attempts, if applicable)
2. Current Year NOC with PNR number
3. Marriage Certificate / Gazette Notification (if applicable for name change)
4. Transfer Certificate Application Form to be submitted to the previous college after admission

S.Y.B.Sc (Information Technology): - AS PER NEP 2020

Syllabus for Semester – Sem III & IV Ref: GR dated 20th April, 2023 for Credit

BSC IT NEP Semester III			
Sr. No	Component	Subject	Total Credits
1	Major	Python Programming	2
2	Major	Operating System	2
3	Major	Data Structures	2
4	Major	Major Practical 3	2
5	Minor	(a) Vector Spaces	2
6	Minor	(b) PM-3B Vector Spaces	2
7	OE	Cyber Security	2
8	VSC	APPLIED MATHEMATICS	2
9	AEC	b. भाषांतर कौशल्ये (Marathi)	2
10	FP		2
11	CC	Indian Theatre: Classical Roots and Contemporary Expressions	2
Total Credits			22

Structure of UG (With effect from the academic year 2026-27 progressively)

BSC IT NEP Semester IV			
Sr. No	Component	Subject	Total Credits
1	Major	Core Java	2
2	Major	Software Engineering	2
3	Major	Computer Networks	2
4	Major	Major Practical 4	2
5	Minor	a) Linear Algebra	2
6	Minor	b) PM-4B Linear Algebra	2
7	OE	Web Development	2
8	SEC	Computer Graphic	2
9	AEC	Introduction to Communication Skills in English II	2
10	CEP	Community Engagement Project.	2
11	CC	Integrated Theatre Production: Stage Craft, Costume, Music and Technology	2
Total Credits			22

• **Documents required:**

A. First Year B.Sc.Comp.Sci. (NEP-2020) – Maharashtra Board Students

3. HSC Mark Sheet
4. Birth Proof

B. Second Year B.Sc.Comp.Sci. (NEP-2020) – Students from University of Mumbai Affiliated Colleges

5. FY mark sheets (all attempts/semester-wise mark sheets, if applicable)
6. Current Year NOC with PNR number from the last attended college
7. Marriage Certificate / Gazette Notification (if applicable for name change)
8. Transfer Certificate Application Form to be submitted to the previous college after admission

C. Third Year B.Sc.Comp.Sci.

For Students from University Affiliated Colleges:

5. FY & SY mark sheets (all attempts, if applicable)
6. Current Year NOC with PNR number
7. Marriage Certificate / Gazette Notification (if applicable for name change)
8. Transfer Certificate Application Form to be submitted to the previous college after admission

For the current academic year, students have to submit their Diploma passing certificates at the time of admission. The students who passed their Diploma examination in March of the current year have to submit their Diploma passing Certificate in the month of December in the current academic year.

* Original certificate will be returned after verification of form.

Students admitted on provisional on eligibility Certificate required to submit their original Migration Certificate.

Note:

1. The 75% 25% pattern has been introduced for BSc.IT from the academic year 2020-2021(**circular no. UG/176**)
2. For theory per paper is 100 marks: 75 marks out of 100 marks will be external and 25 marks out of 100 marks would be internals
3. For practical, per paper is 50 marks: 40 marks out of 50 marks will be practicals and 10 marks out of 50 will be viva and journal report.
4. Theory internal assessment is of objective type/test based on the subject knowledge
5. Practical internal assessment is based on problem solving ability and practical skill assess during lecture sessions

Standard of Passing:

1. In the 75:25 scheme of examination every paper is considered as a separate head of passing.
2. Minimum passing marks required in every head is 40% (Theory + Practical)
3. To pass the theory examination student must secure minimum 30 marks out of 75 marks
4. To pass the internal examination student must secure minimum 10 marks out of 25 marks
5. To pass the practical examination student must secure minimum 20 marks out of 50 marks

T.Y.B.Sc (Information Technology): - (CBCS - Semester Pattern (w.e.f. Academic Year 2021-2022) with 75:25 Scheme of examination circular no. UG/176). Revised syllabus from 2021-22.

SEMESTER 5		
Course code	Course Title	Credits
USIT501	Software Project Management	2
USIT502	Internet of Things	2
USIT503	Advanced Web Programming	2
USIT504	Artificial Intelligence	2
USIT506	Enterprise Java	2
USIT5P1	Project Dissertation	2
USIT5P2	Internet of Things Practical	2
USIT5P3	Advanced Web Programming Practical	2
USIT5P4	Artificial Intelligence Practical	2
USIT5P6	Enterprise Java Practical	2
Total Credits		20

(All the practical mentioned in the syllabi are compulsory as per the courses)

SEMESTER 6		
Course code	Course Title	Credits
USIT601	Software Quality Assurance	2
USIT602	Security in Computing	2
USIT603	Business Intelligence	2
USIT604	Principles of Geographic Information Systems	2
USIT606	IT Service Management	2
USIT6P1	Project Implementation	2
USIT5P2	Security in Computing Practical	2
USIT5P3	Business Intelligence Practical	2
USIT5P4	Principles of Geographic Information Systems Practical	2
USIT5P6	Advanced Mobile Programming	2
Total Credits		20

Note:

1. The 75% 25% pattern has been introduced for BSc.IT from the academic year 2020-2021(**circular no. UG/176**)
2. For theory per paper is 100 marks: 75 marks out of 100 marks will be external and 25 marks out of 100 marks would be internals

3. For practical, per paper is 50 marks: 40 marks out of 50 marks will be practicals and 10 marks out of 50 will be viva and journal report.
4. Theory internal assessment is of objective type/test based on the subject knowledge
5. Practical internal assessment is based on problem solving ability and practical skill assess during lecture sessions

Note for Project:

Semester 5 - Project Dissertation

Semester 6 - Project Implementation

*** NOTE ABOUT PROJECT VIVA VOCE:**

Student may be asked to write code for problem during VIVA to demonstrate his coding capabilities and he/she may be asked to write any segment of coding used in the project. The project can be done in group of at most four students. However, the length and depth of the project should be justified for the projects done in group. A big project can be modularised and different modules can be assigned as separate project to different students.

Marks Distribution:

Semester V: 50 Marks

Documentation: 50 marks

Semester VI: 150 Marks

Documentation: 50 Marks:

Implementation and Viva Voce: 100 Marks

The plagiarism should be maintained as per the UGC guidelines.

Standard of Passing:

1. In the 75:25 scheme of examination every paper is considered as a separate head of passing.
2. Minimum passing marks required in every head is 40% (Theory + Practical)
3. To pass the theory examination student must secure minimum 30 marks out of 75 marks
4. To pass the internal examination student must secure minimum 10 marks out of 25 marks
5. To pass the practical examination student must secure minimum 20 marks out of 50 marks

EVALUATION SCHEME

Internal Examination: (25 mark) : Conducted online MCQ Based

External Examination: (75 marks)

	All questions are compulsory	
Q1	(Based on Unit 1) Attempt <u>any three</u> of the following:	15
a.		
b.		
c.		
d.		
e.		
f.		
Q2	(Based on Unit 2) Attempt <u>any three</u> of the following:	15
Q3	(Based on Unit 3) Attempt <u>any three</u> of the following:	15
Q4	(Based on Unit 4) Attempt <u>any three</u> of the following:	15
Q5	(Based on Unit 5) Attempt <u>any three</u> of the following:	15

Practical Exam: 50 marks

A Certified copy journal is essential to appear for the practical examination.

1.	Practical Question 1	20
2.	Practical Question 2	20
3.	Journal	5
4.	Viva Voce	5

POST GRADUATE PROGRAMMES

3.3 M.A./M.Sc. (Mathematics)

Eligibility for Admission to MSc (Mathematics)-I

A learner for being eligible to apply for admission to the MSc degree course in Mathematics must have passed the BSc degree examination of this university in Mathematics or BSc degree in any other recognised University having minimum 42 credits in the subject of mathematics (minimum credits request should include credits of optional subjects). **OR** Graduate with BE / BTech having minimum 20 credits from the subjects Mathematics, Statistics, Operation Research and computer related courses Artificial Intelligence, Machine Learning and Data Sciences. **OR** passed equivalent academic level 5.5

Part – I (As per NEP-2020)

Course Code	Course	Mandatory/Elective	Credit
Semester-I Level (6.0)			
5130161501	Algebra I	Mandatory	4
5130161502	Real Analysis	Mandatory	4
5130161503	Ordinary Differential Equations	Mandatory	4
5130161504	Discrete Mathematics and Number Theory	Mandatory	2
5130161505	Research Methodology	Mandatory	4
Elective Course			
513016150612	Graph Theory	Elective	4

		Total Credits:	22
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Course Code	Course	Mandatory/Elective	Credit
Semester-II Level (6.0)			
5130162511	Algebra II	Mandatory	4
5130162512	Topology	Mandatory	4
5130162513	Complex Analysis	Mandatory	4
5130162514	Partial Differential Equations	Mandatory	2
5130162515	FP (Field Project)	Mandatory	4
Elective Course			
513016251614	Numerical Analysis	Elective	4
		Total Credits:	22

Scheme of Examination (70:30):- There will be separate heads of passing for the internal and the external examination.

The internal examination will be conducted online on the LMS or on any other platform provided by CODE.

The semester end examination will be conducted as per the University norm.

For almost all courses, then entire e-content will be shared on our LMS

1. The video lectures and learning material will be from Open Educational Resources (OER) and SWAYAM MOOCS on the Learning Management System(LMS) of CDOE.
2. Internal assessment will be conducted on the LMS.
3. Learners have to do self study from the learning materials on the LMS. Semester End examination will be as per University norms.

Part – II (As per NEP2020)

(There will be 5 Papers for Part – II, 500 Mark with 30% Marks Internal assessments per Paper)

SEMESTER III			
Course Code	Course	Mandatory/Elective	Credit
5130163551	Algebra III	Mandatory	4
5130163552	Differential Geometry	Mandatory	4
5130163553	Measure Theory and Integration	Mandatory	4
5130163554	Probability Theory and Statistics	Mandatory	2
5130163555	Research Project	Mandatory	4
513016355620	R Programming	Elective	4

Total Credits	22
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SEMESTER IV			
Course Code	Course	Mandatory/Elective	Credit
5130164561	Algebra IV	Mandatory	4
5130164562	Fourier Analysis	Mandatory	4
5130164563	Functional Analysis	Mandatory	4
5130164564	Research Project	Mandatory	6
513016456514	Calculus on Manifolds	Mandatory	4
Total Credits			22
Cumulative Credits (SEM-I, SEM-II, SEM-III and SEM-IV):			88

As per the BoS of Mathematics resolution the following are details about the Project work:

Evaluation of Project work

The evaluation of the Project submitted by a student shall be made by a Committee appointed by the Head of the Department of Mathematics of the respective college.

The presentation of the project is to be made by the student in front of the committee appointed by the Head of the Department of Mathematics of the respective college. This committee shall have two members, possibly with one external referee.

Each project output shall be displayed on the website of the University.

The Marks for the project are detailed below:

1. Contents of the project: 50 Marks
2. Attendance: 10 Marks
3. Presentation of the project: 20 Marks
4. Viva of the project: 20 Marks
5. Total Marks= 100 Marks per project per student

As per the M. Sc. (Maths) Class Improvement ordinance 0.2462 student has to appear for class Improvement within 5 years from the passing years. (Please see link http://archive.mu.ac.in/myweb_test/M.A.%20MSc.%20%28Maths%29%20Class%20Improvement%20Ordinance.pdf)

M.A. / M.Sc. (Mathematics) – Part I

General Instructions

- Students must scan and upload all the required documents in **original**.
- **Photograph and Signature** must be scanned and uploaded during the registration process.

Documents Required for Students from Affiliated Colleges of the University of Mumbai

1. Original mark sheet of the First Year examination. In case of more than one attempt, students must upload the **first** and **last** mark sheets of the respective year.
2. Marriage Certificate / Gazette Notification (applicable to married female students) in case of a change in the student's name.

M.A. / M.Sc. (Mathematics) – Part II

General Instructions

- Photograph and Signature must be scanned and uploaded during the registration process.

Documents Required for Students from Affiliated Colleges of the University of Mumbai

1. Original mark sheet of the First Year examination. In case of more than one attempt, students must upload the **first** and **last** mark sheets of the respective year.
2. Current Year's No Objection Certificate (NOC) from the last attended college.
3. Convocation Certificate.
4. Marriage Certificate / Gazette Notification (applicable to married female students) in case of a change in the student's name.

3.4 M.Sc. (Computer Science) (Two Year) - As Per NEP 2020

Introduction:

The Master of Science in Computer Science (M.Sc. Computer Science) is an advanced program that combines academic research and industry standards, addressing the evolving needs of both the industry and research domains. The curriculum focuses on cutting-edge technologies and industry insights, ensuring students gain the necessary expertise to thrive in the current landscape.

Throughout this program, students will delve into a wide range of relevant subjects. In first year, they study subjects including Machine Learning, Image Processing, Networking, Blockchain, Cloud Computing, Big Data, Computer and Network Security, Web Data Mining, and Simulation and Modelling. In the M.Sc. second year program, students will engage with major mandatory subjects such as Web3 Technologies, Cyber Security and Risk Assessment, Ethical & Responsible AI, Deep Learning, and Big Data Analytics. They can also choose from major elective subjects like Social Network Analysis or Data Visualization or Fuzzy Systems, as well as Trends in Cloud Computing or Remote Sensing or Server Virtualization. Research projects in both semesters provide practical experience and foster critical skills. This comprehensive curriculum equips students with the latest knowledge and prepares them for diverse opportunities in computer science. These courses are carefully designed to equip students with the skills required to tackle the challenges and opportunities in the rapidly expanding field of Computer Science. The program is structured as a fusion of Major Mandatory and Major Elective courses, encompassing the latest trends and advancements in Computer Science. In each semester, students have the opportunity to choose one elective subject aligned with their interests from a selection of three options. The Major Mandatory courses establish a strong foundation in fundamental concepts of Computer Science and Research, while the electives enhance their knowledge for real-world applications. Practical implementation is facilitated through the use of industry-standard tools and simulators, such as Cisco for networking and Python for programming.

To further enhance the students' readiness for industry, the curriculum incorporates a mandatory On Job Training (OJT) component in Semester II. This intensive training, equivalent to a full course, provides invaluable exposure to real-world scenarios within IT or IT-related organizations. By applying their theoretical knowledge in practical settings, students gain firsthand experience and develop the necessary skills to thrive in the professional world. In addition to technical skills, this program also focuses on cultivating research ethics and promoting a research-oriented mindset among learners. The inclusion of a Research Methodology Course helps students develop a strong research attitude, enabling them to contribute meaningfully to the advancement of Computer Science. The comprehensive education provided by the M.Sc. in Computer Science program equips students with the confidence to adapt and excel in an ever-evolving industry and academic landscape. The curriculum's continuous refinement has been made possible through the valuable inputs, suggestions, and observations of colleagues at the University of Mumbai, experts from premier institutions, and industry professionals. We extend our gratitude to all those who have directly or indirectly contributed to the development of this program. With these combined efforts, the M.Sc.

in Computer Science program aims to empower students with the skills and knowledge necessary to thrive in the digital world.

Aims and Objectives

The aims and objectives of the M.Sc. Computer Science program collectively aim to develop well-rounded computer science professionals who are not only technically competent but also capable of contributing to research, innovation, and the overall advancement of the field.

Objectives:

Provide In-depth Knowledge

The program aims to provide students with a comprehensive understanding of the key concepts, theories, and methodologies in Computer Science. It covers a range of topics including machine learning, data mining, data visualization, and data management, enabling students to develop a deep knowledge base in these areas.

Develop Programming Skills: The program aims to equip students with strong programming skills by providing hands-on experience with different tools and technologies. Students will gain proficiency in designing front-end and back-end solutions, enhancing their ability to develop robust and scalable applications.

Foster Problem-solving Abilities: The program aims to enhance students' problemsolving abilities by training them to approach real-world data challenges critically and creatively. Students will learn to identify problems, design appropriate data analysis strategies, and develop innovative solutions using their knowledge of Computer Science.

Encourage Collaboration and Teamwork: The program aims to foster collaboration and teamwork skills among students, recognizing that computer science projects often require interdisciplinary collaboration. Students will learn to effectively communicate, collaborate, and contribute as part of a team, preparing them for collaborative work environments.

Foster Industry Relevance: The program aims to stay up-to-date with industry trends and technologies to ensure graduates are well-prepared for the demands of the Computer Science job market. Through industry partnerships and internships, students will have the opportunity to gain practical experience and stay in touch with the latest advancements in the field.

Professional Development: The program aims to prepare students for successful careers in the field of Computer Science. In addition to technical skills, students will develop professional skills such as teamwork, project management, and leadership. The program may also provide networking opportunities, internships, or collaborations with industry partners to enhance students' industry readiness and employability.

Cultivate Research Skills: The program aims to cultivate research skills among students by providing a Research Methodology Course and encouraging participation in research projects. Students will

learn to conduct literature reviews, design experiments, analyze data, and present their findings, fostering a research-oriented mindset and contributing to the advancement of Computer Science.

By incorporating these objectives, the M.Sc. Computer Science program aims to produce graduates who possess a strong foundation in Computer Science, are adept at problemsolving and collaboration, have industry-relevant skills, and are well-prepared for both research and professional roles in the field.

Learning Outcomes

Develop a solid foundation in fundamental concepts, theories, and methodologies of Computer Science. Offer opportunities for specialization in a chosen area of Computer Science. Foster a research-oriented mindset and contribute to the advancement of Computer Science. Prepare learners for lifelong learning, adapting to emerging technologies and industry requirements. Inculcate professional attitudes, leadership qualities, and social responsibility. Equip students with industry-relevant skills and experiences for successful careers. Enhance critical thinking and innovative problem-solving abilities.

Syllabus

SUBJECTS (Sem I and Sem II)

Year	Level	Sem	Major				RM	OJT/FP	RP	Cum. Cr.	Degree
			Mandatory			Electives					
1	6.0	Sem I	2*4+2*2+2			4	4	Research Methodology (510)	-	-	22
			Applied Signal & Image Processing (501)	TH	4	NoSQL Technologies (506a) 2 TH+2 PR (OR) Robotic (506b) 2 TH +2PR (OR) UI/UX Design (506c) 2 TH +2 PR					
			Applied Signal & Image Processing Practical (502)	PR	2						
			Software Defined Networking(503)	TH	4						
			Software Defined Networking Practical (504)	PR	2						
			Principles of Compiler Design(505)	TH	2						
		Sem II	2*4+2*2+2			4	-	OJT (517) 4	-	22	
			Machine Learning (511)	TH	4	Bioinformatics (516a) 2 TH + 2PR (OR) Embedded and IoT Technology (516b) 2 TH +2PR (OR) Web Data Analytics (516c) 2 TH +2PR					
			Machine Learning Practical(512)	PR	2						
			Natural Language Processing(513)	TH	4						
			Natural Language Processing Practical (514)	PR	2						
			Simulation and Modelling (515)	TH	2						
		Cum.Cr. For PG Diploma			28	8	4	4	44		
		Exit Option : PG Diploma (44 credits) after Three Year UG Degree									

SUBJECTS (Sem III and Sem IV)

Year	Level	Sem (2yr)	Major				RM	OJT/FP	RP	Cum.Cr.	Degree	
			Mandatory 2*4+2*2+2		Electives 4							
2	6.5	Sem III	Web3Technologies (601)	TH	4	Social Network Analysis (606a) 2 TH +2PR (OR) Data Visualization (606b) 2 TH+2 PR (OR) Fuzzy Systems (606c) 2 TH +2PR	-	-	RP (607) 4	22	PG Degree after 3-yr UG	
			Web3 Technologies Practical (602)	PR	2							
			Cyber Security and Risk Assessment (603)	TH	4							
			Cyber Security and Risk Assessment Practical (604)	PR	2							
			Ethical & Responsible AI (605)	TH	2							
			2*4+2*2		4							
		Sem IV	Deep Learning(611)	TH	4	Trends in cloud computing (615a) 2 TH +2PR (OR) Remote Sensing (615b) 2 TH +2PR (OR) Server Virtualization (615c) 2 TH +2PR	-	-	RP (616)	22		
			Deep Learning Practical (612)	PR	2							
			Big Data Analytics (613)	TH	4							
			Big Data Analytics Practical (614)	PR	2							
			2*4+2*2		4							
					8							
Cum.Cr. For 1 Yr PG Degree			26		8				10	44		
Cum.Cr. For 2 Yr PG Degree			54		16		4	4	10	88		

EVALUATION SCHEME

NOTE: As per UGC-DEB regulations, for distance learning programs, the examination pattern has been decided to be in a 70:30 ratio.

A. Evaluation for Mandatory Theory Courses (4 Credit Courses)

- a. Internal Evaluation for Mandatory Theory Courses – 30 Marks
 - i. This is MCQ type online exam. In that one question and four options will be given. Student should choose the correct one
 - ii. This is a 30-mark exam
- b. External Examination for Mandatory Theory Courses – 50 Marks
 - i. Duration: 2.0 Hours
 - ii. Theory question paper pattern
 - iii. This is 50-mark exam

All questions are compulsory.			
Question	Based on	Options	Marks
Q.1	Unit I	Any 2 out of 4	10
Q.2	Unit II	Any 2 out of 4	10
Q.3	Unit III	Any 2 out of 4	10
Q.4	Unit IV	Any 2 out of 4	10
Q.5	Unit I, II, III & IV	Any 2 out of 4	10

- iv. As per the UGC-DEB regulations (70:30 ratio), the above 50 marks are converted to 70 marks.

- B. Evaluation for Elective Theory Courses (2 Credit Courses)
- Internal Evaluation for Elective Theory Courses – 15 Marks
 - This is MCQ type online exam. In that one question and four options will be given. Student should choose the correct one
 - This is a 15-mark exam
 - External Examination for Elective Theory Courses – 25 Marks
 - Duration: 1 Hour
 - Theory question paper pattern
 - This is 25-mark exam

All questions are compulsory.			
Question	Based on	Options	Marks
Q.1	Unit I	Any 2 out of 4	10
Q.2	Unit II	Any 2 out of 4	10
Q.3	Unit I & II	Any 1 out of 2	5

- iv. As per the UGC-DEB regulations (70:30 ratio), the above 25 marks are converted to 35 marks

- C. Evaluation for Mandatory & Elective Practical Courses (2 Credit Courses)
- Each Practical Course carries 50 Marks
 - 40 marks + 05 marks (journal) + 05 marks (viva)
 - Duration: 2 Hours for each practical course.
 - Minimum 80% practical from each core subjects are required to be completed.
 - Certified Journal is compulsory for appearing at the time of Practical Exam
- D. Evaluation of On Job Training Course/Field Project (4 Credit Course)
- Details specification will be given once the Sem-I completed.
- E. Evaluation of Research Project (4 Credit Course) for SEM III
- Details specification will be given once the SEM III start.
- F. Evaluation of Research Project (6 Credit Course) for SEM IV
- Details specification will be given once the SEM IV start

Letter Grades and Grade Points

Semester GPA/ Program CGPA Semester/Program	% of Marks	Alpha-Sign / Letter Grade Result
9.00-10.00	90.0-100	O (Outstanding)
8.00-<9.00	80.0-<90.0	A+ (Excellent)
7.00-<8.00	70.0-<80.0	A (Very Good)
6.00-<7.00	60.0-<70	B+ (Good)
5.50-<6.00	55.0-<60.0	B (Above Average)
5.00-<5.50	50.0-<55.0	C (Average)
4.00-<5.00	40.0-<50.0	P (Pass)
Below 4.00	Below 40	F (Fail)
Ab (Absent)	-	Absent

Scheme of Examination for Theory Courses

There will be an internal and external examination for the theory courses. The weightage of internal/external and scheme of examination will be as per common guidelines provided by the University for the PG courses in the faculty of Science.

Scheme of Examination for Practical Courses

There will not be any internal examination for practical courses.

Documents required: Students should scan & upload all the required documents in Original.

3.5 M. Sc. (Information Technology)-(Based on NEP 2020)

Title of the program : B- M.Sc. (Information Technology) (Two Year)

Syllabus for Semester – Sem I & II Ref: GR dated 16th May, 2023 for Credit Structure of PG.

Year	Level	Major		Electives	RM	OJT/FP	RP	Cum. CR	Degree	
I	6	Mandatory			4	4			PG Diploma	
		2*4+2*2+2								
		Data Science(S01)	TH	4	Security breaches and countermeasures(S06a)PR					
		Data Science Practical(S02)	PR	2						
		Soft Computing Techniques(S03)	TH	4						
		Soft Computing Techniques practical(S04)	PR	2	OR					
		Cloud Computing(S05)	TH	2	Image Processing(S06c)	Research Methodology(S10)	-	-	22	
		2*4+2*2+2								
		Big Data analytics(S11)	TH	4	Malware Analysis(PR)(S16a)					
		Big Data analytics(S12)	PR	2						
		Modern Networkings(S13)	TH	4						
		Modern Networkings(S14)	PR	2	OR					
		Microservices architecture(S15)	TH	2	Computer Vision(PR)(S16c)	Research Methodology(S10)	-	(S17)4	22	
		um Cr For PG Diploma		28	8	4	4			

Syllabus Link: [6.29-N-M.Sc.-Information-Technology-Sem.-I-II.pdf \(mu.ac.in\)](https://mu.ac.in/6.29-N-M.Sc.-Information-Technology-Sem.-I-II.pdf)

Theory courses of 4 credits: Total marks 100. Out of the total, 50 % each for internal and external evaluation.

A. Internal Evaluation (30m + 10m + 10m = 50 Marks)

The internal assessment marks shall be awarded as follows:

1. 30 marks (Any one of the following):

- Written Test of 30 Marks
- SWAYAM (Advanced Course) of minimum 20 hours and certification exam completed or c. NPTEL (Advanced Course) of minimum 20 hours and certification exam completed or
- Valid International Certifications (Prometric, Pearson, Certiport, Coursera, Udemy and the like)
- Certification marks of one completed exam shall be awarded to one course only. For four courses, the students will have to complete four certifications.

(Note: Only those certification/courses suggested by the department shall be deemed valid, Student cannot do any certification on their own)

2. 10 marks from every course (Two 4 credits mandatory courses, one 2 credits mandatory course, one 4 credits elective course) coming to a total of 40 marks, shall be awarded on publishing of research paper in UGC approved / Other Journal with plagiarism less than 15%. The marks can be awarded as per the impact factor of the journal, quality of the paper, importance of the contents published, social value.

3. 10 marks Open Book examination based on problem solving related to the respective subject.

i. **Suggested format of Question paper of 30 marks for the written test.**

Q1.	Attempt <i>any two</i> of the following:	16 marks
a.		
b.		
c.		
d.		
Q2.	Attempt <i>any two</i> of the following:	14 marks
a.		
b.		
c.		
d.		

B. External Examination: (50 marks) Duration : 2 hrs

	All questions are compulsory	
Q1	(Based on all units) Attempt <i>any two</i> of the following:	10 marks
a.	Unit 1	
b.	Unit 2	
c.	Unit 3	
d.	Unit 4	
Q2	(Based on Unit 1) Attempt <i>any two</i> of the following:	10 marks
Q3	(Based on Unit 2) Attempt <i>any two</i> of the following:	10 marks
Q4	(Based on Unit 3) Attempt <i>any two</i> of the following:	10 marks
Q5	(Based on Unit 4) Attempt <i>any two</i> of the following:	10 marks

Theory courses of 2 credits: Total marks 50.

Out of the total, 40 % each for internal and external evaluation.

Commented [1]: Need clarification here

A. Internal Evaluation (25 Marks):

The internal assessment marks shall be awarded as follows:

1. 10 marks from every course (Two 4 credits mandatory courses, One 2 credits mandatory course, One 4 credits elective course) coming to a total of 40 marks, shall be awarded on publishing of research paper in UGC approved / Other Journal with plagiarism less than 15%. The marks can be awarded as per the impact factor of the journal, quality of the paper, importance of the contents published, social value.
2. 10 marks - Open Book examination based on problem solving related to the respective subject.
3. 5 marks - Assignment/Group discussion.

B. External Examination: (25 marks) Duration : 1 hr

	All questions are compulsory	
Q1	(Based on Unit 1) Attempt <i>any two</i> of the following:	13 marks
Q2	(Based on Unit 2) Attempt <i>any two</i> of the following:	12 marks

Practical courses of 2 credits: Total marks 50. Out of the total, 50 % each for internal and external evaluation.

A. Practical Evaluation Internal (25 marks)

1.	Performance during all practical sessions	10
2.	Problem solving with the acquired programming skills	10
3.	Viva Voce	5

B. Practical Evaluation External (25 marks)

A Certified copy of hard-bound journal is essential to appear for the practical examination.

1.	Practical Question	15
2.	Journal	5
3.	Viva Voce	5

Letter Grades and Grade Points

Semester GPA/Program CGPA Semester/Program	Percentage of Marks	Alpha-Sign/Letter Grade Result
9.00 – 10.00	90.00-100.00	O (Outstanding)
8.00 – <9.00	80.00 – <90.00	A+ (Excellent)
7.00 – <8.00	70.00 – <80.00	A (Very Good)
6.00 – <7.00	60.00 – <70.00	B+ (Good)
5.50 – <6.00	55.00 – <60.00	B (Above Average)
5.00 – <5.50	50.00 – <55.00	C (Average)
4.00 – <5.00	40.00 – <50.00	P (Pass)
Below 4.00	Below 40.00	F (Fail)
Ab(Absent)	-	Absent

Semester – Sem.- III & IV Ref: GR dated 16th May, 2023 for Credit Structure of PG (With effect from the academic year 2024-25)

For the M.Sc.I.T.-Part-2, academic Year 2024-25 CDOE is providing selected subjects from selected track:(Study Material Available)

Artificial Intelligence Track
Cloud Computing Track
Security Track

Semester III					
Course code	Theory	Credit	Course code	Practical	Credit
PSIT301	Technical Writing and Entrepreneurship Development	4	PSIT3P1	Project Documentation and Viva	2
PSIT303a	Machine Learning	4	PSIT3P3a	Machine Learning Practical	2
PSIT302c	Cloud Application Development	4	PSIT3P2c	Cloud Application Development Practical	PSIT302c
PSIT304d	Offensive Security	4	PSIT3P4d	Offensive Security Practical	2
	Total Theory Credits	16		Total Practical Credits	8
Total Credits for Semester III: 24					
Semester IV					
Course Code		Theory Credits	Course Code		Practical Credit
PSIT401	Blockchain	4	PSIT4P1	Blockchain Practical	2
PSIT403a	Deep Learning	4	PSIT4P2a	Deep Learning Practical	2
PSIT402d	Cyber Forensics	4	PSIT4P2d	Cyber Forensics Practical	2
PSIT404c	Storage as a Service	4	PSIT4P4	Project Implementation and Viva	2
	Total Theory Credits	16		Total Practical Credits	8
Total Credits for Semester IV: 24					

Syllabus: https://mu.ac.in/wp-content/uploads/2020/12/4.100.-M.Sc.I.T.-Part-2-Syllabus-2020-2021_Annexure-I.pdf

Note:

Evaluation Scheme Internal Evaluation (25 Marks)

The internal assessment marks shall be awarded as follows:

1. 5 marks (Any one of the following):

- a. Written Test or
- b. SWAYAM (Advanced Course) of minimum 20 hours and certification exam completed or
- c. NPTEL (Advanced Course) of minimum 20 hours and certification exam completed or
- d. Valid International Certifications (Prometric, Pearson, Certiport, Coursera, Udemy and the like)
- e. One certification mark shall be awarded one course only.

For four courses, the students will have to complete four certifications.

2. 10 marks The marks given out of 25 (15 in Semester 4)

for publishing the research paper should be divided into four courses and should be awarded out of 10 in each of the four courses.

ii. 10 marks from every course coming to a total of 40 marks, shall be awarded on publishing of research paper in UGC approved / Other Journal with plagiarism. Less than 10%. The marks can be awarded as per the impact factor of the journal, quality of the paper, importance of the contents published, social value.

External Examination: 75 Marks

	All questions are Compulsory	
Q1	(Based on Unit 1) Attempt any three of the following a. _____ b. _____ c. _____ d. _____ e. _____	15 marks
Q2	(Based on Unit 2) Attempt any three of the following	15 marks
Q3	(Based on Unit 3) Attempt any three of the following	15 marks
Q4	(Based on Unit 4) Attempt any three of the following	15 marks

Q5	(Based on Unit 5) Attempt any three of the following	15 marks
----	--	----------

Practical Evaluation (50 marks)

A Certified copy of hard-bound journal is essential to appear for the practical examination.

1.	Practical Question 1	20
2.	Practical Question 2	20
3.	Journal	5
4.	Viva Voce	5

OR

1.	Practical Question	40
2.	Journal	5
3.	Viva Voce	5

Project Documentation and Viva Voce Evaluation

The documentation should be checked for plagiarism and as per UGC guidelines, should be less than 10%.

1.	Documentation Report (Chapter 1 to 4)	20
2.	Innovation in the topic	10
3.	Documentation/Topic presentation and viva voce	20

1.	Documentation Report (Chapter 5 to last)	20
2.	Implementation	10
3.	Relevance of the topic	10
4.	Viva Voce	10

Appendix – 1 Project Documentation and Viva-voce (Semester III) and Project Implementation and Viva-Voce (Semester IV)

Goals of the course Project Documentation and Viva-Voce

The student should:

- be able to apply relevant knowledge and abilities, within the main field of study, to a given problem
- within given constraints, even with limited information, independently analyze and discuss complex inquiries/problems and handle larger problems on the advanced level within the main field of study
- reflect on, evaluate and critically review one's own and others' scientific results
- be able to document and present one's own work with strict requirements on structure, format, and language usage.
- be able to identify one's need for further knowledge and continuously develop one's own knowledge.

To start the project:

Start thinking early in the programme about suitable projects.

Read the instructions for the project.

- Attend and listen to other students' final oral presentations.
- Look at the finished reports.
- Talk to senior master students.
- Attend possible information events (workshops / seminars / conferences etc.) about the related topics.

Application and approval:

- Read all the detailed information about the project.
- Finalize finding a place and supervisor.
- Check with the coordinator about the subject/project, place and supervisor.
- Write the project proposal and plan along with the supervisor.
- Fill out the application together with the supervisor.
- Hand over the complete application, proposal and plan to the coordinator.
- Get an acknowledgement and approval from the coordinator to start the project.

Get an acknowledgement and approval from the coordinator to start the project.

During the project:

- Search, gather and read information and literature about the theory.
- Document well the practical work and your results.
- Take part in seminars and the running follow-ups/supervision.
- Think early on about disposition and writing of the final report.
- Discuss your thoughts with the supervisor and others.
- Read the SOP and the rest you need again.
- Plan for and do the mid-term reporting to the coordinator/examiner.
- Do a mid-term report also at the work-place (can be a requirement in some work-places).
- Write the first draft of the final report and rewrite it based on feedback from the supervisor and possibly others.
- Plan for the final presentation of the report..

Finishing the project:

- Finish the report and obtain an OK from the supervisor.
- Ask the supervisor to send the certificate and feedback form to the coordinator.
- Attend the pre-final oral presentation arranged by the Coordinator.

- Rewrite the final report again based on feedback from the opponents and possibly others.
- Prepare a title page and a popular science summary for your report.
- Send the completed final report to the coordinator (via plagiarism software).
- Rewrite the report based on possible feedback from the coordinator.
- Appear for the final exam.

Project Proposal/research plan

- The student should spend the first 1-2 weeks writing a 1-2 pages project plan containing:
 - Short background of the project - Aims of the project
 - Short description of methods that will be used
 - Estimated time schedule for the project
- The research plan should be handed in to the supervisor and the coordinator.
- Writing the project plan will help you plan your project work and get you started in finding information and understanding of methods needed to perform the project.

Project Documentation

The documentation should contain:

- The student should spend the first 1-2 weeks writing a 1-2 pages project plan containing:
 - Short background of the project
 - Aims of the project - Short description of methods that will be used
 - Estimated time schedule for the project
- The research plan should be handed in to the supervisor and the coordinator.
- Writing the project plan will help you plan your project work and get you started in finding information and understanding of methods needed to perform the project.

For the master's documentation, the chapters cannot be dictated, they may vary according to the type of project.

However, in Semester III Project Documentation and Viva Voce must contain at least 4 chapters (Introduction, Review of Literature, Methodology / Approach, Proposed Design / UI design, etc. depending on the type of project.)

The Semester III report should be spiral bound.

In Semester IV, the remaining Chapters should be included (which should include Experiments performed, Results and discussion, Conclusions and proposals for future work, Appendices) and

Bibliography - references and links.

Semester IV report should include all the chapters and should be hardbound.

STANDARD OF PASSING: - (M.Sc. Computer Science)

1. In 80:20 Scheme of examination, every paper and practical is considered as separate head of passing.
2. Minimum passing marks require in every head is 40% (theory as well as in practical).
3. To pass the examination the student must secure minimum 30 marks out of 75 marks in each theory paper separately
4. For practical component, student needs to score minimum 20 marks out of 50 marks in each practical.
5. Project has 100 marks and student need to score minimum 40% marks for passing.

DETAILS OF PROGRAMMES IN FACULTY OF TECHNOLOGY

3.6 Master of Computer Application Course (MCA)

Two year (Four semesters) Post Graduate Programme

MCA – SEM I & SEM II (Revised 2020-21) Semester I

Course Code	Category	Course Name	Examination Scheme						
			Theory			Practical		End Term Exam	Total Marks
			Internal Assessment			Term Work	Practical Exam		
			CA	Test	Total				
MCA11	Major (Mandatory)	Mathematical Foundation for Computer Science	25	25	50	25	--	50	125
MCA12	Major (Mandatory)	Advanced Java	25	25	50	--	--	50	100
MCA13	Major (Mandatory)	Advanced Database Management System	25	25	50	--	--	50	100
MCA14	Major (Mandatory)	Software Project Management	25	25	50	--	--	50	100
MCAE15	Major (Elective)	Elective - 1	25	25	50	25	--	50	125
MCAL11	Major (Mandatory)	Advanced Data Structures Lab	--	--	--	50	50	--	100
MCAL12	Major (Mandatory)	Advanced Java Lab	--	--	--	50	50	--	100
MCAL13	Major (Mandatory)	Advanced Database Management System Lab	--	--	--	50	50	--	100
MCAL14	Major (Mandatory)	Web Technologies Lab	--	--	--	50	50	--	100
MCAP11	OJT/FP	Mini Project – 1A	--	--	--	25	25	--	50
		Total	125	125	250	275	225	250	1000

MCA	Semester I
MCAE154	e-Commerce

Elective

Semester II

Course Code	Category	Course Name	Examination Scheme						
			Theory			Term Work	Practical Exam	End Term Exam	Total Marks
			Internal Assessment						
			CA	Test	Total				
MCA21	Research Methodology (RM)	Research Methodology	25	25	50	25	--	50	125
MCA22	Major (Mandatory)	Artificial Intelligence and Machine Learning	25	25	50			50	100
MCA23	Major (Mandatory)	Information Security	25	25	50			50	100
MCAE24	Major (Elective)	Elective - 2	25	25	50			50	100
MCAE25	Major (Elective)	Elective - 3	25	25	50	25		50	125
MCAL21	Major (Mandatory)	Soft Skill Development				50			50
MCAL22	Major (Mandatory)	Artificial Intelligence and Machine Learning Lab				50	50		100
MCAL23	Major (Mandatory)	Devops Lab				50	50		100
MCALE24	Major (Elective)	Elective - 2 Lab				50	50		100
MCAL25	Major (Mandatory)	Advanced Web Technologies (AWT) Lab				50	50		100
MCAL26	Major (Mandatory)	User Interface Lab				50	50		100
MCAL27	Major (Mandatory)	Networking with Linux Lab				50	50		100
MCAP21	OJT/FP	Mini Project – 1B				25	25		50
		Total	125	125	250	425	325	250	1250

MCA Semester II Electives

Elective 2

Sr. No	Course Code	Course Name	Lab Course Code
1	MCAE243	Natural Language Processing	MCALE243

Elective 3

Sr. No	Course Code	Course Name
1	MCAE252	Management Information System

SECOND YEAR M.C.A. SEMESTER III & IV
Semester III

Course Code	Category	Course Name	Examination Scheme						
			Theory			Practical		End Term Exam	Total Marks
			Internal Assessment			Term Work	Practical Exam		
		CA	Test	Total					
MCA31	Major (Mandatory)	Big Data Analytics and Visualization	25	25	50			50	100
MCAE32	Major (Elective)	Elective - 4	25	25	50			50	100
MCAE33	Major (Elective)	Elective - 5	25	25	50			50	100
MCAE34	Major (Elective)	Elective - 6	25	25	50	25		50	125
MCAL31	Major (Mandatory)	Big Data Analytics and Visualization Lab				50	50		100
MCALE32	Major (Elective)	Elective - 4 Lab				50	50		100
MCALE33	Major (Elective)	Elective - 5 Lab				50	50		100
MCAL34	Major (Mandatory)	Mobile Computing Lab				50	50		100
MCARP31	Research Project (RP)	Research Project (RP)				75	75		150
MCAFP31	Field Project (FP)	Individual Social Responsibility (ISR)							
Total			100	100	200	300	275	200	975

MCA Semester III Electives

Elective – 4				
Sr. No.	Course Code	Course Name	Lab Course Code	Lab Course Name
1	MCAE321	Computer Vision	MCALE321	Computer Vision Lab
2	MCAE322	Deep Learning	MCALE322	Deep Learning Lab
3	MCAE323	Distributed System and Cloud Computing	MCALE323	Distributed System and Cloud Computing Lab

Elective – 5				
Sr. No.	Course Code	Course Name	Lab Course Code	Lab Course Name
1	MCAE331	Software Testing Quality Assurance	MCALE331	Software Testing Quality Assurance Lab
2	MCAE332	Ethical Hacking	MCALE332	Ethical Hacking Lab
3	MCAE333	Blockchain	MCALE333	Blockchain Lab

Elective – 6		
Sr. No.	Course Code	Course Name
1	MCAE341	Design Thinking & Innovation Skills
2	MCAE342	Digital Forensics
3	MCAE343	Entrepreneurship Management

N.B.: - ASSIGNMENT SUBMISSION

1. Students are required to submit their respective term works/assignments at their respective Learner Support centres.
2. Internal assessment of Tutorials to be done separately and term work marks to be given out of 25 for those courses where tutorial is mentioned.

Semester IV

Course Code	Category	Course Name	Examination Scheme			
			Internal Assessment		University Assessment	Total Marks
			Mid term Presentation I	Mid term Presentation II	Final Presentation	
MCAIP41	On Job Training (OJT)	Internship Project	75	75	150	300
MCARP42	Research Project (RP)	Research Paper / Product / Patent	50	50	--	100
MCAMS43	MOOCS	Massive Open Online Course (MOOC)	--	--	--	--
Total			125	125	150	400

Work load only for students

! Credits transferred from MOOC courses

* Credits allotted in semester IV based on the (ISR) work done in semesters I II III

Note:

● The Online Course- 1 (MOOC) has to be completed before the completion of the MCA course

(it can be done in the Semester 1 to 4 but to be accounted for in semester 4).

Program Structure for Bridge Course (With Effect from 2020-2021)

For the graduates, not having graduation in Computer Science/Information Technology/Computer Application, need to complete the bridge course in first year of MCA along with the semester I and II of MCA

Course Code	Course Name	Group	Teaching Scheme (Contact Hours)			Credits Assigned			
			Theory	Pract	Tut.	Theory	Pract	Tut	Total
MCABR1	Java Programming	Major	3	--	--	--	--	--	--
MCABR2	Data Structures	Major	3	--	--	--	--	--	--
MCABR3	Operating Systems	Major	3	--	--	--	--	--	--
MCABR4	Computer Networks	Major	3	--	--	--	--	--	--
MCABR5	Discrete Mathematics	Major	3	--	--	--	--	--	--
	Total		15		-	-	-	-	-

Course Code	Course Name	Group	Examination Scheme							
			Theory				Practical		Total	
			Internal Assessment			End Sem	Exam. Duration	Pract		
			CA	Test	Total		In Hrs		Oral	
MCABR1	Java Programming	Major	25	25	50	50	2	--	--	100
MCABR2	Data Structures	Major	25	25	50	50	2	--	--	100
MCABR3	Operating Systems	Major	25	25	50	50	2	--	--	100
MCABR4	Computer Networks	Major	25	25	50	50	2	--	--	100
MCABR5	Discrete Mathematics	Major	25	25	50	50	2	--	--	100
	Total									500

3.9 Allowed to Keep Terms (ATKT): for two years MCA program

Bridge Course for two years MCA program:

- The graduates, not having graduation in Computer Science/Information Technology/ Computer Application, **need to complete the bridge course in the first year of MCA** along with the Semester I and II of MCA without which s/he will not be promoted to Semester III.
- The syllabus of the Bridge Course is mentioned in the Syllabus (wef 2020-21 – MCA 2 years Programme)

Allowed to Keep Terms (ATKT) for two years MCA program:

1. A learner shall be allowed to keep term for Semester II irrespective of grades obtained in each course of Semester I.

2 a) **For CS/ IT/ CA graduates** : A learner shall be allowed to keep term for Semester III if s/he passes each of Semester I , Semester II

2 b) **For Non CS/ IT/ CA graduates**: A learner shall be allowed to keep term for Semester III if s/he passes each of Semester I , Semester II along with all courses of Bridge courses

OR

S/he fails in not more than five heads of passing of Semester I and Semester II taken together. (Excluding Bridge Course)

3. A learner shall be allowed to keep term for Semester IV irrespective of grades obtained in each course of Semester III.

Note: Grade AB should be considered as failed and treated as one head for deciding

ATKT Note: Even though Term Work is not a separate head of passing, a learner should satisfactorily complete Term Work in all courses for a particular semester as per syllabus/curriculum manual to be eligible to appear for any form of examination.

Standard of passing M.C.A

To pass in the individual subject of each semester examination, a student must obtain a minimum 40 percent of the full marks in (a) theory paper and (b) term work, test and internal assessment separately of that subject.

Those of the students who obtained 40 percent of total marks obtainable in each theory paper, term work, test, class work and internal assessment, as the case may be, taken separately shall be declared to have passed the semester examination. A student who fails in an examination but has passed in any of the subjects of that examination may at his option be exempted from reappearing for the same at a subsequent attempt and will be declared to have passed the relevant semester examination when he has passed in the

remaining subjects.

Award of the classes

Those students who obtain (i) 60 percent of marks on the aggregate of the First Year, Second Year examination taken together will be placed in the First Class, (ii) 70 per cent marks on the aggregate will be declared to have passed the examination with first class with Distinction and (iii) 50 per cent marks on the aggregate will be declared to have passed the examination in the Second Class.

Documents required: Students should scan & upload all the required documents in Original. Photo & Signature has to be scanned during the Registration process

First Year – M.C.A.

Documents Required for Admission (Old Students – CDOE)

1. **Original Mark Sheets of Degree Examination (First, Second, and Third Year)**
 - Students who have passed in more than one attempt must upload the **first attempt** and **final attempt** mark sheets of the respective year.
2. **HSC (Higher Secondary Certificate) Mark Sheet** or its equivalent.
3. **Marriage Certificate / Gazette Notification** (applicable to married female students only) in case of a change in the student's name.
4. **Proof of Date of Birth**
 - Leaving Certificate (LC) or Aadhaar Card

SECTION-THREE

4. RULES, REGULATIONS, SERVICES AND FACILITIES

4.1 INSTRUCTIONS TO SCHOLARSHIP STUDENTS.

<https://drive.google.com/file/d/1rshyv0CmnZd5XuDzQy7jZHjZ5NgiBStY/view>



University of Mumbai
मुंबई विद्यापीठ

CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)
[FORMERLY INSTITUTE OF DISTANCE AND OPEN LEARNING (IDOL)]

दूरस्थ व ऑनलाईन शिक्षण केंद्र (सीडीओई)

[पूर्वाची दूर व मुक्त अध्ययन संस्था (आयडॉल)]

<https://mahadbt.maharashtra.gov.in/> या संकेतस्थळावर मुंबई विद्यापीठाच्या दूरस्थ व ऑनलाईन शिक्षण केंद्रात प्रवेश

घेणा-या विद्यार्थ्यांसाठी पुढीलप्रमाणे शिष्यवृत्ती योजना मंजुरी आहे.

या व्यतिरिक्त इतर कोणत्याही प्रकारची शिष्यवृत्ती योजना दूरस्थ व ऑनलाईन शिक्षण

केंद्रातील अभ्यासक्रमास मंजूरी नाही, याची विद्यार्थ्यांनी नोंद घ्यावी.

Social Justice and Special Assistance Department सामाजिक न्याय व विशेष सहाय्य विभाग	Tribal Development Department अदिवासी विकास विभाग	VJNT, OBC and SBC Welfare Department विमुक्तजाती, अद्वय जाती, इतर मागास वर्ग कल्याण संवाहालया
Schedule Caste अनुसूचित जाती	Scheduled Tribes अनुसूचित जमाती	Vismukt Jati, Nomadic Tribes (Other Backward Class / Special Backward Classes विमुक्त जाती, अद्वय जाती / इतर मागास / विशेष मागास वर्ग
Govt. of India Post-Matric Scholarship भारत सरकार पोस्ट-मॅट्रिक शिक्षणवृत्ती खेळा	Post-Matric Scholarship Scheme (Govt. of India) भारत सरकार पोस्टमॅट्रिक शिक्षणवृत्ती	Post Matric Scholarship to OBC/VJNT/SBC इतर / विजात / वि.स. प्रत्यक्ष विद्यार्थ्यांना पोस्टमॅट्रिक शिक्षणवृत्ती
आयस्क कागदपत्रे स्वातीतलभाणे :-	आयस्क कागदपत्रे स्वातीतलभाणे :-	आयस्क कागदपत्रे स्वातीतलभाणे :-
उत्पन्न प्रमाणपत्र (राश्वतीतल इतर प्रमाण) (वार्षिक उत्पन्न रु. २.५ लाख किंवा वार्षिका कमी असणे).	वार्षिक वार्षिक उत्पन्न प्रमाणपत्र (पोस्टमॅट्रिक उत्पन्न रु. २.५०,०००)	उत्पन्न प्रमाणपत्र / निवडता उत्पन्न प्रमाण, प्रमाण प्रमाणपत्राकडून जात केलेले असणे. (वार्षिक उत्पन्न रु. २.५ लाख किंवा वार्षिका कमी असणे).
जात प्रमाणपत्र (विवाही अनुसूचित जातीचा किंवा नवईत असावा).	जात प्रमाणपत्र (अनुसूचित जमाती).	जात प्रमाणपत्र / प्रमाण प्रमाणपत्राकडून जात केलेले असणे. (माहातरा शासनाद्वारे जात केलेले). वार्षिकपत्रा वरुता नसणे हे प्रमाणपत्र प्राप्त झाले जात.
डॉमिनसॉन प्रमाणपत्र (विवाही माहातरा राज्याचा अधिवासी असावा).	डॉमिनसॉन प्रमाणपत्र (माहातरा राज्याचा अधिवासी असावा).	डॉमिनसॉन प्रमाणपत्र (माहातरा राज्याचा अधिवासी असावा).
१०वी/१२वी परीक्षेची गुणपत्रिका या वर्षीच्या परीक्षेची गुणपत्रिका.	१०वी/१२वी परीक्षेची गुणपत्रिका मागील वर्षीचे गुणपत्रिका.	१०वी/१२वी परीक्षेची गुणपत्रिका या वर्षीच्या परीक्षेची गुणपत्रिका.
सिंघाप्रतील रुंद वळतो अर्ज वर योग्यपत्र (आयस्क असल्यास). (Cap Cert.) & (Self Declaration If Required)	कोटरी लवतलत्यावळतो प्रतिज्ञापत्र (Affidavit)	आयस्क प्रमाणपत्र - सिंघाप्रतील रुंद वळतो असल्यास हे प्रमाणपत्र अतिवाही असतल. (Cap Cert.)
वरिलेले मुलु प्रमाणपत्र (आयस्क असल्यास).	वरिलेले मुलु प्रमाणपत्र (आयस्क असल्यास).	माता / माहाप्रतील सोडल्यास प्रमाणपत्र. (Leaving Cert.)
परिते उत्पन्न प्रमाणपत्र (अर्जदार तल विवाही तल असल्यास) (वार्षिक उत्पन्न रु. २.५ लाख किंवा वार्षिका कमी असणे).	परिते उत्पन्न प्रमाणपत्र (अर्जदार तल विवाही तल असल्यास) (वार्षिक उत्पन्न रु. २.५ लाख किंवा वार्षिका कमी असणे).	सिंघाप्रतील (Ration Card) - मुलांप्रतील मुलांची एवढी संख्या ओळखल्यावळती (केवढ तल अपय). i) कुलीनाती हि अर वळतावळता जाती. ii) एवढी वळतावळती जातीतल जातल २ मुले सिंघाप्रतील पात्र असतील.
एवढी सलभती मुलांप्रती संवळतावळती अर्ज-अतिवाही / वळतावळती योग्यपत्र. (Declaration Cert.)	वरिलेले / वळतावळती मुलु प्रमाणपत्र (सगु असल्यास).	वरिलेले / वळतावळती मुलु प्रमाणपत्र (सगु असल्यास).
आयस्क संलग्नीतल रुंद वळतो असणे.	आयस्क संलग्नीतल रुंद वळतो असणे.	आयस्क संलग्नीतल रुंद वळतो असणे.

शिष्यवृत्ती बाबत सविस्तर माहितीसाठी mahadbt.maharashtra.gov.in संकेतस्थळ पहावे.

शिष्यवृत्ती अर्ज सादर करण्यापूर्वी "अर्ज सादर करण्याच्या प्रक्रियेचे नियम आणि मार्गदर्शक तत्त्वे" <https://mahadbt.maharashtra.gov.in/> या संकेतस्थळावर कृपया काळजीपूर्वक वाचा.

महाडीबीटी संकेतस्थळावर शिष्यवृत्ती अर्ज सादर करताना **current course details** मध्ये **fees paid** म्हणून ०० (शून्य शून्य) रक्कम नमद करावी. (सवलतीचे शुल्क भरणाऱ्या विद्यार्थ्यांसाठी)

महाडीबीटी संकेतस्थळावर शिष्यवृत्ती अर्ज सादर करताना **College Name** येथे **Centre for Distance and Online Education** असे नाव लिहावे. (Code-10570)

महाडीबीटी संकेतस्थळावर शिष्यवृत्ती अर्ज सादर करताना अभ्यासक्रम अनुदान मान्यता प्रकार (Course Grant Type) येथे Aided व Unaided पर्यायांपैकी **विनाअनुदानित (Unaided) / Non Granted** पर्याय निवडावा.

महाडीबीटी संकेतस्थळावर शिष्यवृत्ती अर्ज सादर करताना **कोर्स डिटेल्स** मध्ये **Distance Mode** हा पर्याय निवडावा.

शिष्यवृत्ती लाभासाठी चालू वर्षासाठी ७५% उपस्थिती अनिवार्य आहे.

प्रवेश शुल्क पावती (Payment Receipt) सोबत ऑनलाईन प्रवेश अर्जाचे (Admission/Application Form) पहिले पृष्ठ एकत्रित स्कॅन करुन अपलोड करावे.

महावीरवीर संकेतस्थळावर शिष्यवृत्ती अर्ज सादर करेल्यानंतर सात दिवसांच्या आत शिष्यवृत्ती अर्जाच्या छायांतीसह दूरस्थ व ऑनलाईन शिक्षण केंद्र (सी.डी.ओ.इ.) चा प्रवेश अर्ज, शुल्क पावती व "हनीचत्र" भरून कक्ष क्रमांक १०८-अ, शिष्यवृत्ती विभाग, दूरस्थ व ऑनलाईन शिक्षण केंद्रात जमा करावेत.

निर्धारित वेळेत ऑनलाईन शिष्यवृत्ती अर्ज सादर करण्यात अयशस्वी झाल्यात किंवा एखाद्या कारणास्तव शासनाकडून शिष्यवृत्ती नानंजूर करण्यात आली तर सर्वसाधारण प्रवर्गासाठी आकारण्यात येणारे संपूर्ण शैक्षणिक खर्च (उर्वरित एकमेकां फरक वगळून) दुरुस्थ व ऑनलाईन शिक्षण केंद्रात भरवाय लागेल.

CDOE मधील ज्या अभ्यासक्रमांचा समावेश महाडिवीटी संकेतस्थळावर नसेल, अशा अभ्यासक्रमास प्रवेश घेणाऱ्या "राखीव प्रदर्ग" विद्यार्थ्यांना संपूर्ण शैक्षणिक शुल्क भरावे लागेल.

* शिष्यवृत्तीसाठी आवश्यक असणारे मूळ कागदपत्रे / मूळ दस्तावेज स्कॅन करून वेबसाईटवर अपलोड करावे लागतात. यापैकी आपणास जे कागदपत्रे लागू असणार ते कागदपत्रे तयार ठेवावेत :-

- ०१) जात प्रमाणपत्र (बारकोड असणारे).
- ०२) उत्पन्न प्रमाणपत्र (प्रवेशावेळील आर्थिक वर्षाचे).
- ०३) जात वैधता पडताळणी प्रमाणपत्र.
- ०४) महाराष्ट्र राज्याचे अधिवास / रहिवासी प्रमाणपत्र (बारकोड असणारे डोमिसाईल).
- ०५) १० वी उत्तीर्ण व अनुत्तीर्ण गुणपत्रिका.
- ०६) १२ वी उत्तीर्ण व अनुत्तीर्ण गुणपत्रिका.
- ०७) मागील / गत वर्षीच्या उत्तीर्ण व अनुत्तीर्ण गुणपत्रिका.
- ०८) शाळा / महाविद्यालय सोडल्याचे प्रमाणपत्र.
- ०९) शिक्षणात खंड असल्यास अंतर / खंड प्रमाणपत्र. (Gap Cert.)
- १०) वडिलांचे मृत्यू प्रमाणपत्र आवश्यक असल्यास.
- ११) राजपत्र नावात बदल असल्यास. (Gazette)
- १२) शिधापत्रिका. (Ration Card)
- १३) नोकरी करत नसल्याबाबतचे प्रतिज्ञापत्र (Affidavit). (फक्त अनुसूचित जमाती साठी).
- १४) आधार संलग्नकृत सीडिंग राष्ट्रीयकृत बँक खाते.
(बँकेचे पासबुक - विद्यार्थ्याचे नाव, खाते क्रमांक, बँकेचा IFSC क्रमांक, बँकेचा पत्ता असणारे पान)
- १५) स्व घोषणापत्र (Self Declaration with Govt. Format).
- १६) Non Creamy Layer (VJNT, OBC & SBC).
- १७) फोटो - अलिकडील काळातील पासपोर्ट साइज.

* महाडीबीटी संकेतस्थळावर ऑनलाईन शिष्यवृत्ती अर्ज सादर करताना जर काही मूळ दस्तावेज अपलोड करण्याची सुविधा उपलब्ध नसेल तर खालीलप्रमाणे एकापेक्षा जास्त मूळ दस्तावेज एकत्र स्कॅन करून अपलोड करू शकतात :-

- ०१) जात **प्रमाणपत्रासोबत** जात वैधता पडताळणी प्रमाणपत्र (व्यावसायिक अभ्यासक्रमासाठी).
- ०२) जात **प्रमाणपत्रासोबत** नॉन क्रिमीलेयर प्रमाणपत्र (VJNT/OBC/SBC प्रवर्गासाठी)
- ०३) उत्पन्न **प्रमाणपत्रासोबत** आईचा उत्पन्न दाखला असल्यास वडिलांचे मृत्यू प्रमाणपत्र **किंवा** अर्जदार विवाहित स्त्री असल्यास पतीच्या उत्पन्न **प्रमाणपत्रासोबत** विवाह नोंदणी प्रमाणपत्र.
- ०४) शाळा / महाविद्यालय सोडल्याचे प्रमाणपत्र **सोबत** नाव बदलाचे राजपत्र किंवा शिक्षणातील खंड प्रमाणपत्र.
- ०५) १० वी उत्तीर्ण **सोबत** अनुत्तीर्ण गुणपत्रिका.
- ०६) १२ वी उत्तीर्ण **सोबत** अनुत्तीर्ण गुणपत्रिका.
- ०७) मागील / गत वर्षीच्या उत्तीर्ण **सोबत** अनुत्तीर्ण गुणपत्रिका.

*** प्रवर्गानुसार आवश्यक असणारे कागदपत्रे खालीलप्रमाणे :-**

१) अनुसूचित जाती Documents Required for SC :-

- जात प्रमाणपत्र (बारकोड असणारे) (विद्यार्थी अनुसूचित जातीचा किंवा नवबौद्ध असावा).
- उत्पन्न प्रमाणपत्र (तहसीलदार द्वारे प्रदान) (वार्षिक उत्पन्न रु. २.५ लाख किंवा त्यापेक्षा कमी असावे).
- १० वी / १२ वी परीक्षेची गुणपत्रिका.
- गत वर्षीच्या परीक्षेची गुणपत्रिका.
- वडिलांचे मृत्यू प्रमाणपत्र (आवश्यक असल्यास).
- शिक्षणातील खंड बाबतचे आणि स्व: घोषणापत्र (आवश्यक असल्यास). (Gap Cert. Self Declaration, if Required)
- पतिचे उत्पन्न प्रमाणपत्र (अर्जदार जर स्त्री आहे आणि विवाहीत असल्यास) वार्षिक उत्पन्न रु. २.५ लाख किंवा त्यापेक्षा कमी.
- डोमिसाईल प्रमाणपत्र (बारकोड असणारे). (विद्यार्थी महाराष्ट्र राज्याचा अधिवासी असावा).

२) अनुसूचित जमाती Documents Required for ST :-

- जात प्रमाणपत्र (बारकोड असणारे) (अनुसूचित जमाती).
- व्यावसायिक अभ्यासक्रमासाठी जाति वैधता प्रमाणपत्र आवश्यक आहे.
- कौटुंबिक वार्षिक उत्पन्न प्रमाणपत्र (कौटुंबिक उत्पन्न <= २,५०,०००).
- १० वी परीक्षेची गुणपत्रिका.
- मागील वर्षीचे गुणपत्रिका.
- डोमिसाईल प्रमाणपत्र (बारकोड असणारे). (महाराष्ट्र राज्याचा रहिवासी असावा).
- नोकरी करत नसल्या बाबतचे प्रतिज्ञापत्र (Affidavit).

३) विमुक्त जाती, भटक्या जमाती, इतर मागासवर्ग व विशेष मागास प्रवर्ग Documents Required for VJNT/OBC/SBC :-

- जात प्रमाणपत्र (बारकोड असणारे) - सक्षम प्राधिकरणाकडून जारी केलेले असावे. (महाराष्ट्र शासनाद्वारे जारी केलेले).
- वास्तव्याचा पुरावा म्हणून हे प्रमाणपत्र ग्राह्य धरले जाईल.
- जात पडताळणी प्रमाणपत्र - व्यावसायिक पदवी अभ्यासक्रम, व्यावसायिक पदव्युत्तर अभ्यासक्रमांसाठी अनिवार्य. बिगर-व्यावसायिक अभ्यासक्रमांसाठी जात पडताळणी प्रमाणपत्र अनिवार्य नाही.
- उत्पन्न प्रमाणपत्र / मिलकत घोषणापत्र. सक्षम प्राधिकरणाकडून जारी केलेले असावे. (वार्षिक उत्पन्न रु. २.५ लाख किंवा त्यापेक्षा कमी असावे).
- १० वी / १२ वी परीक्षेची गुणपत्रिका किंवा गत वर्षीच्या परीक्षेची गुणपत्रिका.
- अंतर प्रमाणपत्र - शिक्षणामध्ये खंड असल्यास हे प्रमाणपत्र अनिवार्य असेल. (Gap Cert.)
- वडिलांचे / पालकांचे मृत्यू प्रमाणपत्र (लागू असल्यास).
- शिधापत्रिका - कुटुंबातील मुलांची एकूण संख्या ओळखण्यासाठी (केवळ दोन अपत्य) (Ration Card)
- (i) मुलीसाठी हि अट बंधनकारक नाही. (ii) एकाच पालकाची जास्तीत जास्त २ मुले शिष्यवृत्तीसाठी पात्र असतील.).
- शाळा / महाविद्यालय सोडल्याचे प्रमाणपत्र.
- एकूण लाभार्थी मुलांच्या संख्येबाबत आई-वडिलांचे / पालकांचे घोषणापत्र. (Declaration Cert.)
- डोमिसाईल प्रमाणपत्र (बारकोड असणारे) (महाराष्ट्र राज्याचा रहिवासी असावा).

* अर्जदाराने (त्याने / तिने) व्यावसायिक ते बिगर व्यावसायिक अभ्यासक्रम बदलल्यास अर्जदार शिष्यवृत्तीसाठी पात्र नसेल परंतु बिगर व्यावसायिक ते व्यावसायिक अभ्यासक्रम बदलल्यास अर्जदार शिष्यवृत्तीसाठी पात्र असेल.

* एक कोर्स पूर्ण होईपर्यंत अर्जदाराची शिष्यवृत्ती / फ्रीशिप चालू राहील. उदाहरणार्थ - १० वी, १२ वी कला - बी.ए., एम.ए., एम.फिल., पी.एच.डी., इत्यादी. अर्जदाराने बी.ए. आणि बी.एड. पूर्ण केले आणि नंतर एम.ए. साठी प्रवेश घेतल्यानंतर, एम.ए. अभ्यासक्रमासाठी त्याला / तिला शिष्यवृत्तीसाठी परवानगी दिली जाणार नाही. पण बी.एड. नंतर एम.बी.ए. मध्ये प्रवेश केल्यानंतर ते शिष्यवृत्तीसाठी पात्र ठरतील कारण तो व्यावसायिक पदव्युत्तर अभ्यासक्रम आहे.

* विशेष व्यावसायिक / बिगर व्यावसायिक अभ्यासक्रमास प्रवेश घेतलेल्या विद्यार्थ्यांनी, त्या शैक्षणिक अभ्यासक्रमासाठी शिष्यवृत्ती / फ्रीशिपचा लाभ घेतला असल्यास आणि दरम्यान सध्याच्या व्यावसायिक अभ्यासक्रमातून बिगर व्यावसायिक अभ्यासक्रमात प्रवेश घेऊ इच्छित अर्जदारास पुढील अभ्यासक्रमासाठी शिष्यवृत्तीचा लाभ मिळणार नाही.

Students seeking admission to the following programmes are hereby informed that they are **not eligible for scholarship benefits** under this scheme:

- M.A. Education
- PGDFM (Post Graduate Diploma in Financial Management)
- CJ/PR (Journalism and Public Relations)
- MMS (Master in Management Studies)
- MCA (Master in Computer Application)
- Courses offered in Online Mode

4.1 INSTRUCTIONS TO ELIGIBILITY STUDENTS.

<https://drive.google.com/file/d/1wGLqrsqDV7RhXH8Qv-ffu044uROWDDA0/view>

4.2 IMPORTANT CIRCULARS & ORDINANCES

<https://cdoe.uom.edu.in/sub.php?name=Rules%20and%20Regulations>

4.3 SUPPORT SERVICES

PERSONAL CONTACT PROGRAMMES:

Telegram Channels

1. For each programme, a separate Telegram channel has been created. The link to the channel will be provided to the students via their registered email ID, and all academic communication will be shared through the channel

STUDY MATERIALS

Study material is the soul of Distance Learning. In that point of view the center is providing maximum study materials in both the languages (Marathi and English). The study materials are prepared in SLM format prescribed by DEB and have the best quality.

LIBRARY FACILITIES

The Center has an independent library having fifty thousand books including texts and references and 22 research journals and periodicals. The CDOE has its own Air Conditioned reading hall situated in Room No. 215. CDOE provides the book lending facility for the students at the head quarter in Room no. 203. Book lending facility is made available for the students during office hours i.e. from 10:20 am to 06:00 p.m. only on working days. During the Examination seasons the reading hall is kept open from 08:00 am. to 08:00 pm. on working days as well as on holidays. The reading hall facility is also provided at Vidyapeeth Vidyarthi Bhavan, 'B' Road, Churchgate, Mumbai 400 020.

XEROX FACILITIES

From the academic year 2009-10 center has made available the Xerox facility to the Students/staff in the premises at a very low cost. Numbers of Students are taking benefits of this scheme.

SYLLABUS AND OLD QUESTION PAPERS

For the ready reference of the students the center has uploaded the old question papers and syllabus on our website mu.ac.in/portal/distance-open-learning.

GUIDANCE AND COUNSELING

CDOE conducts PCP lectures at various centers located in Mumbai and suburban areas and also in Konkan region. The center has also appointed its own teaching faculty for various subjects. At the headquarter our teaching faculty regularly counsel the students during the office hours on working days. The contact details are made available on the CDOE portal.

4.4 RULES AND REGULATIONS

CANCELLATION OF ADMISSION / REFUND OF FEES

If any Student wishes to cancel his/her admission, he/she should apply in the prescribed form available at CDOE, University of Mumbai within thirty days from the date of admission and his/her fees will be refunded as per following ordinances:

0.2859(C) : All the fees paid by a Student at the time of admission shall be refunded to him/her after deducting the administrative charges, if the Student informs the Professor-cum-Director, Centre of Distance and Open Learning, in writing within 30 days from the date of his/her admission.

No. of Days	Amount Deducted
Up to 10 days of admission	Rs. 500/-
11 to 60 days of admission	20% of the total fees
61 to 90 days of admission	30% of the total fees
91 to 120 days of admission	50% of the total fees
After 120 days	No refund

Documents required at the time of admission cancellation

1. Admission Cancellation Form-(Available in CDOE, Room No-001)
2. Admission Form
3. Fee Receipt
4. ID Card
5. Study Materials- If the student has received the study material, it must be submitted in Room No. 5, and remarks must be obtained from the Study Material In-charge.
2. Student's bank details (clear photocopy of the first page of the bank passbook showing the Bank Account Number and IFSC Code, or a cancelled cheque). The refund amount will be credited only to the student's bank account.
3. In case of a name change after marriage, supporting documents such as the Gazette Certificate, Aadhaar Card, Marriage Certificate, etc., along with a written application addressed to the Director, CDOE, are required.)

Important Notice

Ragging is strictly prohibited in higher educational institutions, as per the directions of Hon'ble Supreme Court and University Grants Commission Has Made provision of 6.1 (0) of the UGC Regulation, 2009.

1. Incomplete forms without any of the required documents/ information will be rejected.
2. The N.O.C., Statement of Marks / Provisional Statement of Eligibility etc. submitted by the Students will be sent for verification to their previous colleges / institutions and provisional admission will be granted only after the documents get authenticated. Otherwise, the provisional admission given to the Student will automatically get cancelled without any intimation/ notice to the Student. No refund of fees will be given. The matter will also be reported to the police.
3. The Circulars / Notifications giving details of the Personal Contact Programme Lectures, dates of filling in the examination forms, declaration of results, submission of remaining documents, if any, change of subject granted etc. will be displayed online on the website and on the Notice Boards of the Center. Details of these will not be sent individually to any Student. It is the responsibility of the Students to obtain information about such matters from time to time. Any complaint regarding non-receipt of any such information will not be accepted as an excuse for lapse on the part of the Student.

11.1 General Instructions

1. Incomplete forms without any of the required documents/ information will be rejected.
2. The N.O.C., Statement of Marks / Provisional Statement of Eligibility etc. submitted by the Students will be sent for verification to their previous colleges / institutions and provisional admission will be granted only after the documents get authenticated. Otherwise, the provisional admission given to the Student will automatically get cancelled without any intimation/ notice to the Student. No refund of fees will be given. The matter will also be reported to the police.
3. The Circulars / Notifications giving details of the Personal Contact Programme Lectures, dates of filling

in the examination forms, declaration of results, submission of remaining documents, if any, change of subject granted etc. will be displayed on the official website of the Center. **Details of these will not be sent individually to any Student.** It is the responsibility of the Students to obtain information about such matters from time to time. Any complaint regarding non-receipt of any such information will not be accepted as an excuse for lapse on the part of the Student.

1. The students who had done online admission their Identity cards are available in their respective login.

Changes in Name/ Address / Subject

1. To edit the name and address or subject on the admission or examination forms, students have to take a print of online application form and visit to the concerned section to take an approval and then to the technical department Room No.314 to edit the respective form.
2. For changing the subject once offered, the Students have to apply before 31st October of the same Academic Year.

Duplicate Statement of Marks.

1. In the case of F.Y./S.Y. examinations the prescribed application form to get the duplicate mark sheet is available in CDOE.
2. In the case of Third year and other PG examinations duplicate mark sheet, students has to contact University Examination Section, Chhtrapati Shivaji Maharaj Bhavan (Exam House), Vidyanagari Campus Santacruz Mumbai-400098.
3. The prescribed fee for UG first and second year Duplicate Mark sheet is Rs.100/- to be paid in cash during cash transaction days and hours in CDOE cash section.
4. To apply for the duplicate mark sheet, Student has to attach an Affidavit on 100 Rupees Non Judicial Stamp Paper and also has to attach FIR copy of Police Station.

Bonafide Certificate and Transcript Certificate

1. Students have to fill the prescribed application form to obtain the Bonafide Certificate and Transcript Certificate. This form is available in the PRO Section of CDOE. The details of the documents required to be submitted with this form are given in this form.
2. Prescribed fees for Bonafide Certificate is Rs.20/-) to be paid in cash during cash transaction days and office hours.
3. Prescribed fees for Transcript Certificate for the Under Graduate Programme and Post Graduate Programme is Rs.750/- (per copy) to be paid in cash during cash transaction days and office hours.

11.5 Transfer Certificate and Migration Certificate:

Whenever a Student desires to leave the Center (either before completing the course for which he/she has been admitted or after completing the course) will be required to take the following certificate from the Center/University:

1. If the student wishes to seek admission in another institution / college affiliated to Mumbai University, the student has to take a Transference Certificate from CDOE by paying the prescribed fees Rs.100/- and by applying in the prescribed form with the necessary documents.

(UG/108g1999 Date :- 15/03/1999).

2. If the student wishes to seek admission in other Universities within the country or abroad, the Student is required to obtain a Migration Certificate.
3. **University of Mumbai has introduced the online program to apply migration certificate through online mode.**
4. The students interested in taking admission in other universities needs **to apply for Transfer certificate + migration certificate**. The procedure to obtain the migration certificate,
 - 1) To apply for Migration certificate candidate has to apply for transfer certificate in CDOE
 - 2) Candidate should fill the prescribed form offline for Transfer certificate. The form is available in CDOE.
 - 3) Candidate should pay the fees in cash accordingly in account section of CDOE between 11:00 am to 2:30 pm. (Monday to Friday, Except second & fourth Saturdays and public holidays)
 - 4) Candidate should take the original copy of Transfer certificate along with the Enrollment & Eligibility confirmation letter from CDOE and can proceed with the online process of applying migration certificate and should pay the online fees.
 - 5) Migration Department, University of Mumbai will send the original Migration certificate at your address by post.
 - 6) The link of applying online migration :- <https://mu.migrationcertificate.in/>
Helpline: - For queries related to online application for migration certificate: Contact: - 8291111002 Email: info@migrationcertificate.in

11.6 Admission on Fake Certificates

If any document submitted by the student at the time of admission of any course found false and fake then the admission will be cancelled instantly and the matter will be reported to police for further necessary action.

12. Rules and Regulations Relating to Examination

12.1 General Instructions

1. In the semester pattern the examinations are held twice in a year. The Odd semester exam (sem I, III & V) are generally held in November/December and the even semester examinations (sem II, IV & VI) are held in March/April/May of the respective academic year.
2. Fresh Students of that particular academic year are eligible to appear for the university examination only after satisfactory completion of the semester.
3. In case Students do not appear or appear and fail or ALLOWED TO KEEP TERMS for the examination of higher class (awarded ATKT) have to fill the repeater examination form. For this they are required to check the website to know about the dates of examination forms.
4. The CDOE does not send any information to its Ex-Students/Repeaters.
5. The time-table of the examination would be uploaded 10 days before the date of commencement of the respective examination on the web site of CDOE and also on the social networking sites of CDOE.
6. The information regarding the examination seat numbers and examination center will be displayed on the Hall ticket and students will get their hall tickets in their login.

12.2 Standard of Passing

- **ATKT rules for the UG and PG programmes under NEP Pattern:** The attached circular explains the ATKT rules for the UG and PG programmes. Please read the rules very carefully.

<https://cdoe.uom.edu.in/sub.php?name=Rules%20and%20Regulations>

4.5 SELF STUDY TECHNIQUES

As CDOE is offering all the programmes through Distance Education mode

, face to face classroom study is not possible here. But it should not be difficult for you to complete the course if you plan your work schedule carefully. If you practice a somewhat systematic way of studying the print materials, much of your job will become easy. We shall give you a few suggestions to make your studies easy and interesting.

We understand that you have many domestic and social commitments to attend to or most of you are from the working category and you may not have ample time for studying. But it is possible to spend some time regularly for your studies. Convince your colleagues and family members that you need some privacy to study and stick to a regular time table. As soon as you receive the study materials start-working on it and don't postpone studying the materials or writing your assignments/responses.

We suggest you should know the techniques of self-study. Your study materials contain a lengthy reading list for reference purpose and for deeper understanding of the content. One strategy that gained wide acceptance is the **SQ3R** technique;

SQ3R stands for the initial letters of the five steps in studying text. The five steps are:

(i) Survey (ii) Question (iii) Read (iv) Recall (v) Review

- **Survey**

Survey refers to the quick glance through the title page, preface, chapter headings, etc. of a textbook. Surveying a text helps the Students grasp the main ideas.

A glance at the title page may give you:

- (i) the general subject area
- (ii) the level of approach
- (iii) the author's name and
- (iv) the date and place of publication

Preface helps you decide whether or not the book deserves your attention. Contents tell you what

topics the author is dealing with and how he has organized the themes. An index survey will tell you instantly whether or not the text contains what you need. It also helps you save time and effort by directing you straight to the relevant pages.

- **Question**

Your survey of the text will raise some questions. For example glancing at the title page, preface and contents, you might ask yourself:

How far can I depend on this book? Will the book be helpful to me as its preface suggests? Why should the author devote a whole chapter for such and such a topic?

Having made your survey and started to question, you are now ready for reading the text.

- **Read**

Reading text material demands a critical mind. When we read a text, we apply our mind with all its critical skills. Unless we read actively the questions which have been formulated cannot be answered satisfactorily.

It is not advisable to make notes at this stage. This is not the stage to underline words or phrases either. Keeping these two points in view, what perhaps we can do at the first reading is just to look for the main ideas and the supporting details.

- **Recall**

Reading a text is not the final step in learning. It is, instead, the first step in learning. What is read needs to be recalled for intention. Regular attempts to recall will help improve our learning in three ways

(i) better concentration

(ii) chance to remedy misinterpretation and

(iii) reactive reading. How often to recall chiefly depends on 'how good' a reader you are.

- **Review**

The purpose of reviewing is to check the validity of our recall. The best way to do this is to do a quick repeat of the other four steps i.e. Survey, Question, Read and Recall.

Although the steps of SQ3R are in the logical and natural order there may be overlapping and repetitions between them. Since Distance Learning Students have to work on their own most of the time during their academic career, in this situation, study skills become very important.