



FACULTY OF ENGINEERING AND TECHNOLOGY

UNIVERSITY OF LUCKNOW

**MASTER OF COMPUTER APPLICATION
(TWO YEAR PROGRAMME)**

**TOTAL CREDITS: 96 (CBCS)
(Effective from the session 2020-21)**

INTRODUCTION

MCA programme is to prepare post graduates for productive careers in software industry, corporate sector, Govt. organizations and academia. The programme's thrust is on giving the students a thorough and sound background in theoretical and skill-oriented courses relevant to the latest computer software development. The programme emphasizes the application of software technology to solve mathematical, computing, communications/networking and commercial problems.

This Programme has been designed for total duration of four semesters with Choice Based Credit System (CBCS).

PROGRAM OUTCOMES (POs)

- PO-1.** To produce knowledgeable and skilled human resources which are employable in IT industry.
- PO-2.** To impart knowledge required for planning, designing and building complex Application Software Systems as well as provide support to automated systems or applications.
- PO-3.** To produce entrepreneurs who can develop customized solutions for small to large enterprises.
- PO-4.** To develop competent and professionally motivated personnel, equipped with objective, critical thinking, right moral and ethical values that foster the scientific temper with a sense of social responsibility.
- PO-5.** To train students to become globally competent and employable.

PROGRAM SPECIFIC OUTCOMES (PSOs)

After completing the program students will be capable of:

- PSO-1.** Understanding to apply knowledge of computing and technological advances appropriate to the programme.
- PSO-2.** Analyzing, identifying and defining problems for logical modeling and its solutions.
- PSO-3.** Understanding a sense of professional, ethical, legal, security and social issues and responsibilities.
- PSO-4.** Analyzing the local and global impact of business solutions on individuals, organizations, and society.

ORDINANCES, RULES AND REGULATIONS
for
Master of Computer Applications (MCA)
(Two Year Programme)

(Effective from the session 2020-21)

1. GENERAL INFORMATION:

- 1.1 The degree of Master of Computer Applications (MCA) of University of Lucknow, Lucknow shall be conferred on the candidates who have pursued the prescribed programme of study and have passed the examinations as prescribed in the ordinances. The programme will be conducted on full time basis.
- 1.2 Total number of students admitted to the MCA programme shall be restricted to the numbers decided by the University from time to time. Presently, there shall be 30 seats for MCA programme.

2. PROCESS AND ELIGIBILITY FOR ADMISSION:

- 2.1 Admission to MCA First year (First Semester) will be made through COMMON UNIVERSITY ENTRANCE TEST (CUET) or as decided by Executive Council of the University.
- 2.2 The minimum academic qualification for admission in MCA first semester will be BCA/B.Sc. (Computer Science) /B.Sc. (IT) / B.Sc. (Mathematics) with 55% marks (50% for SC/ST candidates) in aggregate from any recognized Indian University, or its equivalent, recognized by AIU.
- 2.3 The existing reservation rules of the UPSEE/LU shall apply in admitting the students.
- 2.4 In all cases, the admission of an applicant to the MCA programme requires that the applicant must have:
 - 1. The minimum academic qualification as notified,
 - 2. Fulfilled the prescribed admission procedure and paid the prescribed fees.
 - 3. Admission on migration of a candidate from any other University to this University shall not be permitted.

3. PROGRAMME DURATION:

- 3.1 Total duration of MCA programme shall be of two academic years (four semesters). Each year shall comprise of two semesters normally consisting of 90 working days or as prescribed by A.I.C.T.E. from time to time.
- 3.2 The maximum time allowed for a candidate for completing MCA programme shall be of 4 (four) years, failing which he/she shall not be allowed to continue his/her study. Further, a candidate will not be allowed to continue in the subsequent years of the programme, if sufficient time period is not available for its completion in the stipulated maximum duration.
- 3.3 A candidate, who has failed twice in first year due to any reason, including his/her non – appearance or he/she being not permitted to appear in semester examinations, shall not be allowed to continue his/her studies further. The maximum time allowed for completing the course shall remain the same as per the provisions stipulated in clause 3.2

Provided further that if a student wishes to continue third time in first year he/she may be allowed on the recommendation of a committee constituted by the Vice Chancellor. However, the maximum time allowed for completing the course shall remain the same as in clause 3.2.

4. ATTENDANCE:

- 4.1 Students are required to attend 100% classes. Any relaxations in attendance are subject to the satisfaction of concerned HOD/Dean. Normally student shall not be allowed to appear in a semester examination unless he / she has an overall average 75% attendance and 60% attendance in each of the theory/practical subjects in that semester. Moreover, there is relaxation up to 15% in the limit of 75% average attendance of total number of lectures delivered or practical work done in each subject may be allowed for special reasons as given below:
 - (a) A shortage up-to 5% of the total number of lectures delivered or practical work done in each subject may be condoned by the Head of the Department.
 - (b) A further shortage up to 10% may be condoned by the Dean of the Faculty on the specific recommendation of the concerned Head of Department.
- 4.2 No student will be allowed to appear in the end semester examination if he/she does not satisfy the overall average attendance requirements of Clause no. 4.1 and such candidate(s) shall be treated as having failed and will be further governed by clause nos. 4.2 & 4.3.
- 4.3 The attendance shall be counted from the date of admission in the Faculty or start of academic session whichever is later.

(Note: For the purpose of the attendance not more than three periods including lecture and tutorial in the same subject shall be counted on any one day).

5. CURRICULUM STRUCTURE:

The Faculty shall follow credit-based semester system. The programme will have a specific curriculum for all semesters (semester I to semester IV) with a syllabi consisting of theory, practical, dissertation work, etc. and shall be in accordance with the prescribed syllabus. The courses shall be covered through lectures, tutorials, laboratory classes, colloquium & one semester dissertation to be carried out in industry or elsewhere. The curriculum shall also include curricular, co-curricular and extracurricular activities as may be prescribed by the Faculty from time to time.

5.1 Credit Structure

Each course is assigned certain number of credits as follows.

- (a) 1 credit per lecture hour per week
- (b) 1 credit per tutorial hour per week
- (c) 1 credit for 2 hours laboratory /project per week.
- (d) 2 credits for 3 hours laboratory /project per week.

5.2 Course Coverage

The course coverage for all the MCA Programme shall have the following categories:

- i. Humanities and Social Sciences Courses
- ii. Management Courses
- iii. Basic Applied Sciences Courses
- iv. Departmental Core Courses
- v. Departmental Electives Courses
- vi. Projects/Seminars/Training

The curriculum of the Programme has been designed with 96 credits as per the following break-up:

Course Category	Year I		Year II		Total
SEMESTER →	I	II	III	IV	
Humanities, Social Sciences & Management	05				05
Applied Sciences	04				04
Core	15	24	14		53
Electives			08	12	20
Projects/Seminars/ Training			02	12	14
TOTAL	24	24	24	24	96

6. EVALUATION & PROMOTION RULES:

The performance of a student in a semester shall be evaluated through continuous assessment and end semester examination. The continuous assessment shall be based on class tests, assignments/tutorials, quizzes/viva-voce and attendance. Marks for continuous assessment (sessional marks) shall be awarded at the end of the semester. The end semester examination shall comprise of written papers, practical's and viva-voce.

The distribution of marks for sessional, end semester theory papers, practical and other examinations work shall be as prescribed in the course structure. The practical, viva-voce and Project shall be examined/evaluated through internal and external examiners as and when required. The marks obtained in a subject shall consist of marks allotted in end semester theory paper and sessional work.

6.1 Grading System and Assessment Procedure

An **Absolute Grading System** wherein the marks shall be converted into grades and the result of each semester will be declared with **Semester Grade Point Average (SGPA)** and **Cumulative Grade Point Average (CGPA)**. The CGPA will be calculated for every semester, except the first semester. The grading system to be adopted with Letter Grades and Grade Points Scale shall be as given below:

Grades	% Marks	Description of Performance	Grade Point Indicator
O	95-100	Outstanding	10
A ⁺	90-94	Excellent	9
A	80-89	Very Good	8
B ⁺	70-79	Good	7
B	60-69	Above Average	6
C	55-59	Average	5
P	50-54	Pass	4
F	< 50	Fail	0
I	Incomplete	-	-
UFM	Unfair Means	-	-

6.2 Test and Examinations

The theory and practical examinations shall consist of continuous assessment throughout the semester in all the subjects. The End Semester Examination (ESE) will be conducted by the University at the end of the semester. The assessment of courses will be done on absolute marks basis. However, for the purpose of reporting the performance of a candidate, letter grades, each carrying certain points, will be awarded according to the range of total marks obtained by the candidate as detailed below.

S. No.	Exam Category	Evaluation							
		Sessional						ESE	Grand Total
		Class Test		TA			Total		
		CT 1	CT 2	V 1	V 2	CP			
01	Theory Subject	10	10	-	-	10	30	70	100
02	Laboratory work	-	-	05	05	10	20	30	50
03	Internship Project	-	-	-	-	-	20	30	50
04	Major Project	-	-	-	-	-	100	250	350

**CT: Class Test; TA: Teacher's Assessment; ESE: End Semester Examination;
V1: Viva-Voce 1; V2: Viva-Voce 2; CP: Class Performance**

Note:

- A. The course coverage for Class Test-I, Class Test-II and End Semester Exam (ESE) will be 40%, 80% and 100% of the syllabus respectively.
- B. Students who remain absent in either of the class tests on genuine ground such as medical reasons, the University representation in academic/extra-curricular activities with prior permission of the concerned Head of the Department may be permitted for a special test.

Students, who remain absent in both the class tests with prior permission will be allowed only one special test covering 80% of the syllabus.

C. Class Performance will be based on assignments/tutorials, quizzes/viva-voce and attendance

6.3 General Proficiency

A **qualitative Assessment Remark** for General Proficiency as detailed in the table below will be given in the transcript on the basis of cumulative percentages of marks scored by the student during each semester through various components. Distribution/Weightage for award of marks in each component is prescribed in the subsequent table.

S. No.	Assessment	Weightage of Marks	Marks
1.	Discipline/Behavior of Students Inside/Outside University campus by DSW	40%	20
2.	Games/Sports/Cultural/Literary/PFAC/Hobby Events by Chairman CSA	40%	20
3.	Academic Activities/Special Lecture/ Industrial Visits by HOD	20%	10

7. CRITERIA FOR PASSING:

- 7.1 A Student who secures Grade O to P shall be considered as passed. If a student secures “F” grade, he /she has to reappear in the concerned subject examination. It is mandatory for a student to earn the required credits as mentioned in each semester.
- (a) To pass in a Theory Subject, a student shall have to secure minimum 40% of the maximum marks prescribed for the End Semester Examination (ESE) and 50% of marks in the aggregate of End Semester Examination (ESE) and sessional marks assigned for that particular subject, i.e. **Minimum Passing Grade** shall be “P”.
 - (b) To pass in a Practical/Colloquium/Dissertation/Viva-voce examination, a student shall have to secure a minimum of 50% of the prescribed maximum marks in the End Semester Examination of Practical/ Colloquium/Dissertation /Viva-voce and 50% of marks in the aggregate of Practical/ Colloquium/Dissertation /Viva-voce in the ESE and assigned sessional marks i.e. Minimum Passing Grade shall be “P”.
 - (c) To pass in Colloquium, a student shall require to secure a minimum of 50% of the maximum prescribed marks, i.e. Minimum Passing Grade shall be “P”.

- 7.2 The student who do not satisfy the condition 7.1 or the student who remains absent shall be deemed to have failed in that subject and may appear for the University examination in the subsequent examinations. The sessional marks awarded to the student at previous attempt in the concerned subject will be carried forward. However, if the student has secured less than 40% marks in the sessional, he/she shall also be allowed to complete the sessional work of the concerned subject by way of assignments, quizzes and both class tests to improve the sessional marks. The SGPA of the concerned semester will be calculated on the basis of the new grade secured by the student in the repeat examination of the subject (with new or old sessional marks as the case may be). Number of attempts taken to pass a subject shall be recorded in the transcript.
- 7.3 A student may, at his/her desire, opt to abandon his/her performance of a semester in the following manner.
- (a) A student may opt to abandon his/her performance only in University Examination of the Semester.
 - (b) A student may opt to abandon his/her total performance of the Semester which includes performance in University Examination and Sessional Marks.
 - (c) A student may opt to abandon his/her performance in University Examination of any or both semesters of the same academic year only.
 - (d) A student shall be allowed to abandon the performance only twice during the entire course of study.
 - (e) Performance of a semester, once abandoned, cannot be claimed again.
- 7.4 The student, who opts to abandon the performance of a semester as per clause 7.3, shall abandon performance in all the courses of that semester, irrespective of fact whether the student has passed or failed in any subject of that semester.
- 7.5 A student, who opt to abandon the total performance of the semester including sessional marks, has to take readmission for the relevant semester. Readmission to the First semester in such cases shall not be considered as fresh admission i.e., the student will continue to have the same University Roll Number, which was allotted earlier.
- 7.6 The Student, who opted to abandon his/her performance only in the University examination of a semester and does not desire readmission, shall be permitted to re-appear for examinations of all the subjects of the semester in the subsequent examinations as an Ex- Student, However, the sessional marks obtained by the student in the abandoned semester shall be retained as per clause 7.2.

- 7.7 Such students who have opted to abandon the performance at final year are eligible for the award of Class and Distinction at MCA degree level.
- 7.8 A student shall be declared to have completed the programme of MCA degree, provided the student has undergone the stipulated course work as per the regulations and has earned at least 96 Credits.
- 7.9 A student can avail one chance to improve his/her grade in one subject of just preceding semester in the next corresponding End Semester Examination, provided that he/she has secured P or higher grade in that subject. The grade secured in **“Improvement Attempt”** will be used for calculation of SGPA of the concerned semester and old grade secured in that particular subject will stand nullified.

8. ELIGIBILITY FOR PROMOTION:

- 8.1 There shall not be any restriction for promotion from an odd semester to the next even semester.
- 8.2 For promotion from even semester to the next odd semester (i.e. of the next academic year) the student has to secure at least 24 credits in the immediately preceding two semesters including theory and practical credits.

Minimum Credit Threshold for Promotion

Check Point	Credit Threshold
First Year to Second Year	24 Credits in First Year
8.3	The result of the semester shall be declared pass only on securing P or above grades in all subjects and minimum semester Grade Point Average (SGPA) is 5.0.
8.4	Student himself can decide to abandon the performance of any or both the semesters of same academic year as per clause 7.3 and reappear in abandoned semester examination as per clauses 7.4, 7.5, & 7.6.

9. COMPUTATION OF SGPA AND CGPA:

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

$$SGPA(S_i) = \sum (C_i \times G_i) / \sum C_i$$

Where C_i is the number of credits of the i th course and G_i is the grade point scored by the student in the i th course.

- (ii) The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, i.e.

$$CGPA = \sum (C_i \times S_i) / \sum C_i$$

Where S_i is the SGPA of the i th semester and C_i is the total number of credits in that semester.

- (iii) The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

- (iv) Formula for the conversion of CGPA into percent marks is $CGPA \times 10 = (\% \text{ Marks})$

10. AWARD OF DIVISION & RANK:

Division shall be awarded only after the fourth semester examination based on integrated performance of the candidate for all the four semesters as per following details:

- 10.1 A candidate who qualifies for the award of the degree securing P or above grades in all the subjects pertaining to all semesters in first attempt within four consecutive semesters (two academic years), and in addition secures a CGPA of 7.5 or above for the semesters I to IV shall be declared to have passed the examination in **FIRST DIVISION WITH HONOURS**.
- 10.2 A candidate who qualifies for the award of the degree by securing P or above grades in all subjects of all the semesters within maximum permissible period and secures CGPA not less than 6.5 shall be declared to have passed the examination in **FIRST DIVISION**.
- 10.3 All other candidates who qualify for the award of degree by securing P or above grades in all subjects of all semesters and secures CGPA not less than 5.0 shall be declared to have passed the examination in **SECOND DIVISION**.
- 10.4 For award of ranks in the batch, the first **Three** students will be awarded ranks, provided they have secured Grade P or above in all subjects pertaining to all semesters in first attempt within four consecutive semesters (two academic years).

11. SCRUTINY AND RE-EVALUATION:

- 11.1 Scrutiny shall be permitted within two weeks after declaration of result and will only be allowed in theory papers on the request of a student after deposition of prescribed fee for each subject decided by the University.
- 11.2 Re-evaluation of theory/practical papers is not permitted.

12. UNFAIR MEANS:

Cases of unfair means in the End Semester Examinations and Mid-Term Tests shall be dealt as per the rules of the University of Lucknow.

13. EX-STUDENTSHIP:

- 13.1 A candidate opting for ex-studentship shall be required to fulfill the conditions 7.3, 7.4, 7.5 & 7.6 and to appear in all the theory & practical subjects in the End Semester Examinations of both semesters of the same Academic Year. However, the marks of Sessional and General Proficiency shall remain the same as those secured by him/her in the previous Academic Year(s) as per clause 7.2.
- 13.2 A candidate opting for ex-studentship shall be required to apply to the Dean's office by paying only examination fee within 15 days from the start of new session.

14. RE-ADMISSION:

A candidate may be allowed for re-admission provided he/she satisfies one of the following conditions:

- 14.1 A candidate is declared failed.
- 14.2 A candidate did not appear in a semester examination/or he/she was not granted permission to appear in the examination.
- 14.3 A candidate has been detained by the University and subsequently has been permitted to take re-admission.
- 14.4 A candidate promoted with carry over subjects and he/she opted for readmission.

15. CANCELLATION OF ADMISSION:

The admission of a student at any stage of study shall stand cancelled if:

(i) He/she is not found qualified as per AICTE/State Government norms and guidelines or the eligibility criteria prescribed by the University.

or

(ii) If he/she fails to submit qualifying examination result/mark sheet after getting admission to MCA First Semester within a prescribed time.

or

(iii) He/she is found unable to complete the course within the stipulated time as prescribed in clause 4.2.

or

(iv) He/she is found involved in creating indiscipline in the University.

16. In case of any difficulty arising during the course of implementation of these ordinances or in case of any unforeseen circumstance, the interpretation/decision of the Vice-Chancellor shall be final.

17. The Academic Council shall have the power to relax/change any provision provided in the ordinance in any specific matter/situation.

18. Any legal issues arising out of the rules/provisions contained in the ordinances shall fall under the jurisdiction of District Lucknow.

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