MASTER OF COMPUTER APPLICATIONS (MCA) (2-YEAR) (NEP-SEMESTER SYSTEM)

Eligibility condition

For first semester: Pass in Bachelor's Degree exam of the Kurukshetra University or any other recognized University.

(for students having no Mathematics background at 10+2 level or at graduation level, a compulsory bridge course, framed by the University, has to be done and an additional bridge course related to computer subjects for students having no computer science background at 10+2 level or at graduation level, has to be done as per the norms of the University. No. of Seats in MCA is 1000

For 3rd Semester: Students will be provisionally promoted to second year subject to the condition of clearing reappear exams in the permissible chances as per ordinance.

Medium of instructions

Medium of Study Material	Medium of Question Papers	Candidates can write Answers in the following languages
English	English	English

Programmes of Study and Schemes of Examinations

Semester	Course Type	Course Code	Nomenclature of Course	Theory(Th)/ Practical (P) /Seminar/ CHM/OEC/ECC/Dissertation/Project Work	Credits		Content hours per week L: Lecture P: Practical T: Tutorial				Internal Assessment Marks	End Term Examination Marks	Total Marks	Examination hours
					Course	Semester	L	T	P	Total				
	CC-1	M24-CAP-101	Client Side Web Technology	Th	4	26	4	0	0	4	30	70	100	3
	CC-2	M24-CAP-102	Operating System & Linux	Th	4		4	0	0	4	30	70	100	3
	CC-3	M24-CAP-103	Data Structure	Th	4		4	0	0	4	30	70	100	3
	CC-4	M24-CAP-104	Programming in Java	Th	4		4	0	0	4	30	70	100	3

1	PC-1	M24-CAP-105	Practical -1	P	4		0	0	8	8	30	70	100	4
	PC-2	M24-CAP-106	Practical -2	P	4		0	0	8	8	30	70	100	4
	Seminar	M24-CAP-107	Seminar	S	2		0	0	0	2	0	50	50	1
	BC-1*	M24-CAP-108	Computer Fundamentals and Problem Solving Through C	Th	0		4	0	0	4	30	70	100	3
	BC-2*	M24-CAP-109	Practical - 3	P	0		0	0	2	2	15	35	50	4
	*The students who have passed computer science as a subject in graduation/ 10+2 level/ any diploma course from a recognized university are not required to do the bridge course in first semester.													
2	CC-5	M24-CAP-201	Server Side Web Technology	Th	4	26	4	0	0	4	30	70	100	3
	CC-6	M24-CAP-202	Computer Network	Th	4		4	0	0	4	30	70	100	3
	CC-7	M24-CAP-203	Database Management Systems	Th	4		4	0	0	4	30	70	100	3
	CC-8	M24-CAP-204	Artificial Intelligence	Th	4		4	0	0	4	30	70	100	3
	PC-3	M24-CAP-205	Practical-4	P	4		0	0	8	8	30	70	100	4
	PC-4	M24-CAP-206	Practical-5	P	4		0	0	8	8	30	70	100	4
	BC-3#	M24-CAP-207	Mathematical Foundations for Computer Science	Th	0		4	0	0	4	30	70	100	3
	BC-4#	M24-CAP-208	Practical - 6	P	0		0	0	2	2	15	35	50	4
	CHM	M24-CHM-201	Constitutional, Human and Moral Values, and IPR	Th	2		2	0	0	2	15	35	50	3
	Internship	M24-INT-200	An internship course of 4 Credits of 4-6 weeks duration during summer vacation after 2nd semester is to be completed by every student. Internships can be either for enhancing the employability or for developing the research aptitude.								50	50	100	
	#The students who have passed mathematics/statistics as a subject in graduation/ 10+2 level from a recognized university are not required to do the bridge course in second semester.													
	CC-9	M24-CAP-301	Design and Analysis Of Algorithms	Th	4		4	0	0	4	30	70	100	3
	CC-10	M24-CAP-302	Machine Learning in Python	Th	4		4	0	0	4	30	70	100	3
	DEC-1	M24-CAP-303	Ethical Hacking	Th	4		4	0	0	4	30	70	100	3

3	DEC-2	M24-CAP-307	Big Data & Pattern Recognition	Th	4	26	4	0	0	4	30	70	100	3
	PC-5	M24-CAP-309	Practical-7	P	4		0	0	8	8	30	70	100	4
	PC-6	M24-CAP-310	Practical-8	P	4		0	0	8	8	30	70	100	4
	OEC	M24-OEC-308	Data Analytics using Excel	Th	2		2	0	0	2	15	35	50	3
4	DEC-3	M24-CAP-401	Object Oriented Design and Uml	Th	4	26	4	0	0	4	30	70	100	3
	DEC-4	M24-CAP-405	Blockchain Technology	Th	4		4	0	0	4	30	70	100	3
	DEC-5	M24-CAP - 410	Cloud Computing and IOT	Th	4		4	0	0	4	30	70	100	3
	EEC	M24-CAP - 413	Cyber Security Fundamentals	Th	2		2	0	0	2	15	35	50	3
	Dissertation / Project	M24-CAP-414	Dissertation/Project	D	12		0	0	0	12	0	300	300	-

NOTES:

1) A student can opt one elective course in a semester, i.e. up to 40% of total elective courses mentioned in the scheme, through SWAYAM/NPTEL or other online portals recognized by the UGC and the university.

2) Students who have not passed Computer Science as a subject at the graduation level, 10+2 level, or through any diploma course from a recognized university are required to undertake a bridge course in the first semester. Successful completion of this bridge course is mandatory for eligibility to obtain the MCA degree. However, it should be noted that while the marks obtained in the bridge course will be reflected on the final year grade sheet, they will not be included in the calculation of the CGPA/SGPA. Similarly, students who have not studied Mathematics/Statistics as a subject at the graduation level or 10+2 level from a recognized university are required to complete a bridge course in the second semester. Passing this bridge course is also mandatory for eligibility to obtain the MCA degree. As with the first-semester bridge course, the marks obtained will appear on the final year grade sheet but will not contribute to the CGPA/SGPA.

MASTER OF COMPUTER APPLICATIONS (MCA) (2-YEAR) (CBCS) Final Year

THIRD SEMESTER				
MCA-20-31	Computer Architecture & Parallel Processing	4	4	3
MCA-20-32	Data Mining & Integration using R	4	4	3
MCA-20-33	Artificial Intelligence	4	4	3
MCA-20-34	Elective-III	4	4	3
MCA-20-35	Elective-IV	4	4	3
MCA-20-36	S/W Lab-V Based on MCA-20-32	2.5	5	3
MCA-20-37	S/W Lab-VI Based on MCA-20-35	2.5	5	3
MCA-20-38	Summer Training/Internship(Industry Based)	8	-	Viva-voce
*OE-20-39	Students will have to opt One Optional Elective Paper	2	2	-
Total		35	32	-
Elective-III				
MCA-20-34(i)	Cloud Computing and IoT	4	4	3
MCA-20-34(ii)	Cyber Security	4	4	3
MCA-20-34(iii)	Digital Marketing	4	4	3
Elective-IV				
MCA-20-35(i)	Advances in Java	4	4	3
MCA-20-35(ii)	Advanced Web Technologies	4	4	3
MCA-20-35(iii)	Programming with Kotlin	4	4	3
FOURTH SEMESTER				
MCA-20-41	Big data and Patter Recognition	4	4	3
MCA-20-42	Computer Graphics and Animation	4	4	3
MCA-20-43	Mobile Application Development	4	4	3
MCA-20-44	Elective-V	4	4	3
MCA-20-45	Elective-Vi	4	4	3
MCA-20-46	S/W Lab-VII Based on MCA-20-41 & MCA-20-42	2.5	5	3
MCA-20-47	Project Based on MCA-20-43	2.5	5	3
Total		25	30	-
Grand Total		112	124	-
Elective-V				
MCA-20-44(i)	Soft Computing	4	4	3
MCA-20-44(ii)	Machine Learning	4	4	3
MCA-20-44(iii)	Digital Image Processing	4	4	3
Elective-VI				
MCA-20-45(i)	Optimization Techniques	4	4	3
MCA-20-45(ii)	Information Systems	4	4	3
MCA-20-45(iii)	Block chain Technology	4	4	3

Note : In addition to the credits earned by Compulsory & Elective courses, every student has to earn 2 more credits by selecting an open elective/MOOC course during second & Third semester.