K.K. Wagh Institute of Engineering Education and Research, Nashik

Course Structure MCA
[2022 Pattern]
w.e.f.: AY 2022-2023

Details of Course Structure (2022 Pattern) : MCA

● **Summary of Credits and Total Marks :**

Sem	MCA	
	Total Credits (TH+PR /OR/TU)	**Total Marks**
I	22	750
II	22	750
III	24	800
IV	22	400
Total	**90**	**2700**

● **Definition of Credit :**

The Under Graduate (U.G.) and Post Graduate (P.G.) programmes will have credit system. The details of credit will be as follow

1 Credit = 1 hour/week for lecture
= 2 hours /week for practical
= 1 hour /week for tutorial

Course Nomenclature :

- Each Course offered in the MCA curriculum shall be listed by using Nine Characters, the First three being letters and the remaining Six being numerals, as follows:
- The first three characters will represent the Department offering the Programme in abbreviated form, e.g., MCA for Master of Computer Application.
- The 4th and 5th characters will represent the calendar year of the curriculum revision. The 6th character will represent semester such as 1, 2, 3 and 4.
- The 7th character will represent specialization. In MCA curriculum there is no specialization, so this character will be 0.
- Last two characters will represent the Course Number allotted for the subject by the Department, i.e., 01, 02, 03,..etc
- Thus, as an example, courses offered at the Department of MCA could be listed from MCA221001 to MCA224003.

● **Description of various Courses:**

Type of Course	Description
DCC	Department Core Course
DEC	Department Elective Course
OEC	Open Elective Courses of other technical or emerging areas /Courses designed by Industry /Online Courses
PSI	Project work, Seminar, Internship, PBL
LHSM	Liberal arts, Humanities, Social Sciences and Management courses
NC	Non credit Course

● **Abbreviations :**

FY : First Year	SY : Second Year	ISE : In Sem Exam	ESE : End Sem Exam
TH : Theory	PR : Practical	TU : Tutorial	OR : Oral
CCE: Continuous Comprehensive Evaluation	TW: TermWork	MOOCs : Massive Open Online Courses	
NPTEL : National Programme on Technology Enhanced Learning			

K.K.Wagh Institute of Engineering Education and Research, Nashik (Autonomous)
Master of Computer Application
Details of Course Structure: Semester - I   F.Y.M.C.A.

Course Code	Course Type	Title of Course	Teaching Scheme Hrs./week			Evaluation Scheme and Marks						Credits			
			TH	TU	PR	In Sem	End Sem	CCE	TW/ TU	PR	Total	TH	TW /TU	PR	Total
MCA221001	DCC	Discrete Mathematics	3	-	-	20	60	20	-	-	100	3	-	-	3
MCA221002	DCC	Data Structures and Algorithms	3	-	4	20	60	20	50	50	200	3	-	2	5
MCA221003	DCC	Data Communication and Network	3	-	-	20	60	20	-	-	100	3	-	-	3
MCA221004	DCC	Web Technology	3	-	2	20	60	20	25	50	175	3	-	1	4
MCA221005	DCC	Software Engineering	3	-	-	20	60	20	-	-	100	3	-	-	3
MCA221006	DCC	Python Programming	1	1	2	-	-	-	50*	-	50	1	1	1	3
MCA221007	LHSM	Business Communication	-	-	2	-	-	-	25	-	25	-	-	1	1
		Total	16	1	10	100	300	100	150	100	750	16	1	5	22

*50 Marks is divided as 25 marks for Term Work and 25 marks for Tutorial

Master of Computer Application

Details of Course Structure: Semester - II F.Y.M.C.A.

Course Code	Course Type	Title of Course	Teaching Scheme Hrs./week			Evaluation Scheme and Marks						Credits			
			TH	TU	PR	In Sem	End Sem	CCE	TW/TU	PR	Total	TH	TW/TU	PR	Total
MCA222001	DCC	Object Oriented Programming	4	-	4	20	60	20	50	50	200	4	-	2	6
MCA222002	DCC	Database Management System	3	-	4	20	60	20	50	50	200	3	-	2	5
MCA222003	DEC	Elective I A : Artificial Intelligence B: Information Retrieval C: Augmented Reality and Virtual Reality	3	-	2	20	60	20	25	-	125	3	-	1	4
MCA222004	DCC	Advanced Web Technology	3	-	2	20	60	20	25	-	125	3	-	1	4
MCA222005	DCC	UI/UX Design	3	-	-	20	60	20	-	-	100	3	-	-	3
MCA222006	NC	Audit Course A : Entrepreneurship Management B: Foreign Language C: College to Corporate D: Environmental Studies	-	-	-	-	-	-	-	-	-	-	-	Grade	-
		Total	**16**	**-**	**12**	**100**	**300**	**100**	**150**	**100**	**750**	**16**	**-**	**6**	**22**

Course Code	Course Type	Title of Course	Teaching Scheme Hrs./week			Evaluation Scheme and Marks						Credits			
			TH	TU	PR	In Sem	End Sem	CCE	TW/ TU	PR	Total	TH	TW/ TU	PR	Total
MCA223001	DCC	Data Science	3	-	2	20	60	20	25	-	125	3	-	1	4
MCA223002	DCC	Machine Learning	3	-	4	20	60	20	50	50	200	3	-	2	5
MCA223003	DCC	Cloud Computing	3	-	-	20	60	20	-	-	100	3	-	-	3
MCA223004	DEC/ OEC	Elective II A: Information and Network Security B: Current Trends in Computing C: Industry Elective	3	-	-	20	60	20	-	-	100	3	-	-	3
MCA223005	DCC	Software Project Management and Testing	4	-	4	20	60	20	50	50	200	4	-	2	6
MCA223006	LHSM	Introduction to Constitution	2	-	-	-	30	20	-	-	50	2	-	-	2
MCA223007	PSI	Mini Project	-	-	2	-	-	-	25	-	25	-	-	1	1
		Total	**18**	**-**	**12**	**100**	**330**	**120**	**150**	**100**	**800**	**18**	**-**	**6**	**24**

K.K.Wagh Institute of Engineering Education and Research, Nasik (Autonomous)

Master of Computer Application
Details of Course Structure: Semester - IV   S.Y.MCA

Course Code	Course Type	Title of Course	Teaching Scheme Hrs./week			Evaluation Scheme and Marks						Credits			
			TH	TW/ TU	PR-OR	In Sem	End Sem	CCE	TW/ TU	PR-OR	Total	TH	TW/ TU	PR-OR	Total
MCA224001	PSI	Major Project	-	-	18	-	-	-	100	200	300	-	-	18	18
MCA224002	PSI	Technical Seminar	-	-	4	-	-	-	50	-	50	-	-	2	2
MCA224003	PSI	Research Paper / MOOC	-	-	4	-	-	-	50	-	50	-	-	2	2
		Total	**-**	**-**	**26**	**-**	**-**	**-**	**200**	**200**	**400**	**-**	**-**	**22**	**22**