



MADHAV INSTITUTE OF TECHNOLOGY AND SCIENCE, GWALIOR – 474005
(A Govt. Aided UGC Autonomous Institute Affiliated to R.G.P.V. Bhopal, M.P.)

ANNEXURE – IV

Scheme and Syllabi
for
Two Year M.C.A. Programme
[ITEM 11(b)]



MADHAV INSTITUTE OF TECHNOLOGY AND SCIENCE, GWALIOR – 474005
(A Govt. Aided UGC Autonomous Institute Affiliated to R.G.P.V. Bhopal, M.P.)

Guidelines / Abbreviations for Two Years MCA Programme (Effective from July 2020)

Abbreviations used	
L	Lecture
T	Tutorial
P	Practical
BSC	Basic Science Courses
DC	Departmental Core
DE	Departmental Elective
BM	Business Management
OC	Open Category
DLC	Departmental Laboratory Courses
MOOC	Massive Open Online Courses

Definition of Credit:

1 Hr. Lecture (L) per week	1 credit
1 Hr. Tutorial (T) per week	1 credit
2 Hours Practical(Lab)/week	2 credit



MADHAV INSTITUTE OF TECHNOLOGY AND SCIENCE, GWALIOR - 474005
(A Govt. Aided UGC Autonomous Institute Affiliated to R.G.P.V. Bhopal. M.P.)

Master of Computer Applications (MCA) (2 Year Programme) (Semester - I) **Recommended W.E.F JULY 2020**

Scheme of Examination

S. No.	Course Category	Subject Code	Subject Name	Maximum Marks Allotted							Total Marks	Contact Periods per week			Total Credits
				Theory Slot			Practical Slot		MOOC's			L	T	P	
				End sem	Mid sem	Quiz/ Assignment	End Sem	Lab work/ sessional	Assignment	Exam					
1.	BSC	680111	Mathematical Foundations	70	20	10	-	-	-	-	100	3	-	-	3
2.	DC	680112	Data Structures and Algorithms	70	20	10	-	-	-	-	100	3	1	-	4
3.	DC	680113	Database Management Systems	70	20	10	-	-	-	-	100	3	1	-	4
4.	DC	680114	Operating Systems	70	20	10	-	-	-	-	100	3	1	-	4
5.	BM	680115	Management Functions and Oral & Written Communication	70	20	10	-	-	-	-	100	3	-	-	3
6.	DLC	680116	Lab-I (Object Oriented Programming Lab)	-	-	-	90	60	-	-	150	-	-	6	6
7.	DLC	680117	Lab-II (DBMS Lab)	-	-	-	60	40	-	-	100	-	-	2	2
Total				350	100	50	150	100	-	-	750	15	3	8	26

LAJ
Mr
Bul
Kas
Pun
nk

DEAN (ACADEMICS)
M.I.T.S
GWALIOR



MADHAV INSTITUTE OF TECHNOLOGY AND SCIENCE, GWALIOR - 474005
(A Govt. Aided UGC Autonomous Institute Affiliated to R.G.P.V. Bhopal, M.P.)

Master of Computer Applications (MCA) (2 Year Programme) (Semester-II) **Recommended W.E.F JULY 2020**
Scheme of Examination

S. No.	Course Category	Subject Code	Subject Name	Maximum Marks Allotted						Total Marks	Contact Periods per week			Total Credits	
				Theory Slot			Practical Slot		MOOCs		L	T	P		
				End sem	Mid sem	Quiz/ Assignment	End Sem	Lab work/ sessional	Assignment						Exam
1.	DC	680211	Software Engineering	70	20	10	-	-	-	-	100	3	1	-	4
2.	DC	680212	Internet of Things (IoT)	70	20	10	-	-	-	-	100	3	1	-	4
3.	DC	680213	Computer Networks	70	20	10	-	-	-	-	100	3	1	-	4
4.	DE	DE	Departmental Elective-I	70	20	10	-	-	-	-	100	3	-	-	3
5.	BM	DE (BM)	Departmental Elective-II (BM)	70	20	10	-	-	-	-	100	3	-	-	3
6.	DLC	680223	Lab-III (Java Programming Lab)	-	-	-	90	60	-	-	150	-	-	6	6
7.	DLC	680224	Lab-IV (Business Programming Laboratory)	-	-	-	60	40	-	-	100	-	-	2	2
Total				350	100	50	150	100	-	-	750	15	3	8	26

Elective-I course will run through Department List of Electives, as decided by respective BoS / Department. Moreover, this may also be run through SWAYAM/NPTEL MOOC based Learning Platform (with credit transfer facility) (if required) to address the technological advancements and diverse application orientation. The need is to be assessed by the department BoS.

Elective-II course will run through Department List of Electives (for Business Management), as decided by BoS / Department.
List of Electives will remain dynamic and may be kept updated, considering the industrial demand / current practices.

DE-1 (Tentative)	
Subject Code	Subject Name
680214	Computer Architecture and Organization
680215	Computer Graphics and Multimedia
680216	Web Technology
680217	Machine Learning with Python

DE-2 (BM)	
Subject Code	Subject Name
680218	Managerial Economics
680219	Corporate Planning
680220	MIS Framework and Implementation
680221	Management of Software Projects
680222	Organizational Behavior

DEAN (ACADEMICS)
M.I.T.S
GWALIOR



MADHAV INSTITUTE OF TECHNOLOGY AND SCIENCE, GWALIOR - 474005
(A Govt. Aided UGC Autonomous Institute Affiliated to R.G.P.V. Bhopal, M.P.)

Master of Computer Applications (MCA) (2 Year Programme) (Semester-IV) **Recommended W.E.F JULY 2020**

Scheme of Examination

S.No.	Course Category	Subject Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
				Theory Slot			Practical Slot			L	T	P	
				End sem. Exam.	Mid sem.	Quiz/ Assignment	End Sem. /Practical Viva	Sessional Work/ Practical Record/ Assignment/ Quiz/ Presentation					
1.	SEMINAR'S SELF STUDY	680405	Self Learning Presentation Seminar	-	-	-	-	100	100	-	-	2	2
2.	DLC	680406	System Development Project Internship	-	-	-	300	200	500	-	-	20	20
Total				-	-	-	300	300	600	-	-	22	22

¹Self learning presentation through SWAYAM / NPTEL (Registration in a course will be compulsory for students but assessment will be based on internal seminar presentation)



Master of Computer Applications (MCA) (2 Year Programme) (Semester-III) **Recommended W.E.F JUL**
Scheme of Examination

Sl. No.	Course Category	Subject Code	Subject Name	Maximum Marks Allotted							Total Marks	Contact Hours per week			Total Credits
				Theory Slot			Practical Slot		MOOCs			L	T	P	
				End sem. Exam.	Mid sem.	Quiz/Assign.	End Sem. /Practical Viva	Sessional Work / Practical Record/ Assignment etc.	Assignment	Exam					
1.	DC	680311	Artificial Intelligence and Applications	70	20	10	-	-	-	-	100	3	1	-	4
2.	DC	680312	Management Support Systems	70	20	10	-	-	-	-	100	3	-	-	3
3.	DC	680313	Data Mining and Warehousing	70	20	10	-	-	-	-	100	3	-	-	3
4.	DE	DE	Departmental Elective-III* (MOOC)	-	-	-	-	-	25	75	100	3	-	-	3
5.	OC	OC	Open Category Course**	70	20	10	-	-	-	-	100	3	-	-	3
6.	DLC	680322	Minor Project	-	-	-	90	60	-	-	150	-	-	06	06
7.	DLC	680323	Lab-V (Python Programming Lab)	-	-	-	60	40	-	-	100	-	-	04	04
Total				280	80	40	150	100	25	75	750	15	1	10	26

* Elective-III (MOOC) will run through SWAYAM / NPTEL / MOOC based learning platform (with credit transfer facility, MOOC course will be treated as the course of open nature and will be decided by concerning department / BoS.

** Open Category course will have to be opted from the pool of open courses. This course will be based on interdisciplinary aspects. [This course may be run through SWAYAM/NPTEL based platform (with credit transfer facility) and accordingly, OC pool may be created from the list of SWAYAM/NPTEL courses].

List of Electives will remain dynamic and may be kept updated, considering the industrial demand / current practices.

DE-3 (Tentative)	
Subject Code	Subject Name
680314	Cloud Computing
680315	Social Networks
680316	Big Data Computing

OC	
Subject Code	Subject Name
680317	Web Technologies
680318	Human Computer Interaction
680319	Network and Cyber Security

(Handwritten signatures and initials)