

DAYANANDA SAGAR UNIVERSITY
SHAVIGE MALLESHWARA HILLS, KUMARASWAMY LAYOUT
BENGALURU – 560 111, KARNATAKA.

SCHOOL OF ENGINEERING



SCHEME & SYLLABUS
FOR
MASTER OF COMPUTER APPLICATIONS

(I, II, III & IV Semesters)

(With effect from 2022-23)

SCHEME - MCA - 2021 - 22 ONWARDS

I Semester

#	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR/AU	SCHEME OF TEACHING					PRE-REQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	224	21MCA4101	DATA STRUCTURES	CR	3	-	-	-	3	*	***
2	224	21MCA4102	COMPUTER ARCHITECTURE AND MICROCONTROLLER	CR	3	-	2	-	4	*	***
3	224	21MCA4103	ADVANCED OPERATING SYSTEMS	CR	3	-	-	-	3	*	***
4	224	21MCA4104	ADVANCED SOFTWARE ENGINEERING AND TESTING	CR	3	-	2	-	4	*	***
5	224	21MCA4105	PROBABILITY & STATISTICS	CR	3	-	2	-	4	*	***
6	224	21MCA4106	DATA STRUCTURES LAB	CR	-	-	4	-	2	*	***
7	224	21MCA4107	ADVANCED OPERATING SYSTEM LAB	CR	-	-	4	-	2	*	***
					15	-	14	-	22		

CR – Credit, AU – Audit, L – Lecture, T – Tutorial, P – Practical, S/P – Seminar/Project, C – No. of Credits

SCHEME - MCA - 2021 - 22 ONWARDS

II Semester

#	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR/AU	SCHEME OF TEACHING					PRE-REQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	224	21MCA4201	ADVANCED ALGORITHMS	CR	3	-	-	-	3	*	***
2	224	21MCA4202	JAVA PROGRAMMING	CR	3	-	-	-	3	*	***
3	224	21MCA4203	COMPUTER COMMUNICATION AND NETWORKS	CR	3	-	-	-	3	*	***
4	224	21MCA4204	DATABASE MANAGEMENT SYSTEMS	CR	3	-	-	-	3	*	***
5	224	21MCA4205	ADVANCED ALGORITHMS LAB	CR	-	-	4	-	2	*	***
6	224	21MCA4206	JAVA PROGRAMMING AND NETWORKS LAB	CR	-	-	4	-	2	*	***
7	224	21MCA4207	DATABASE MANAGEMENT SYSTEMS LAB	CR	-	-	4	-	2	*	***
8	224	21MCA4208	SUMMER INTERNSHIPS	CR	-	-	4	-	2	*	***
9	224	21MCA42XX	DEPARTMENT ELECTIVE - I	CR	3	-	2	-	4	*	***
					15		18	-	24		

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#	COURSE CODE	DEPARTMENT ELECTIVE - I
1	21MCA4209	DATA ANALYTICS & VISUALIZATION
2	21MCA4210	VIRTUALIZATION & CLOUD COMPUTING
3	21MCA4211	FULL STACK DEVELOPMENT

III SEMESTER

#	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR/AU	SCHEME OF TEACHING					PRE-REQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	224	21MCA4301	AI AND MACHINE LEARNING	CR	03	-	-	-	03	*	***
2	224	21MCA4302	EMBEDDED SYSTEMS AND INTERNET OF THINGS	CR	03	-	-	-	03	*	***
3	224	21MCAXXXX	DEPARTMENT ELECTIVE -2	CR	03	-	02	-	04	*	***
4	224	21MCAXXXX	DEPARTMENT ELECTIVE -3	CR	03	-	02	-	04	*	***
5	224	21MCA4303	AI AND MACHINE LEARNING LAB USING PYTHON	CR	-	-	04	-	02	*	***
6	224	21MCA4304	EMBEDDED AND INTERNET OF THINGS LABORATORY	CR	--	--	04	-	02	*	***
7	224	21MCA4305	SOCIALLY RELEVANT PROJECT	CR	--	--	08	-	04	*	***
					12	-	20	-	22		

COURSE CODE	DEPARTMENT ELECTIVES II & III
21MCA4306	DISTRIBUTED COMPUTING (HADOOP AND SCALA)
21MCA4307	DATA MINING
21MCA4308	BUSINESS INTELLIGENCE TECHNOLOGY
21MCA4309	BIG DATA WITH R
21MCA4310	DATA SCIENCE
21MCA4311	CLOUD NETWORKING & SECURITY
21MCA4312	CLOUD STORAGE
21MCA4313	MOBILE APPLICATION DEVELOPMENT TECHNIQUES

IV SEMESTER

#	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR/AU	SCHEME OF TEACHING					PRE-REQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	224	21MCAXXXX	DEPARTMENT ELECTIVE -4	CR	03	-	02	-	04	*	***
2	224	21MCAXXXX	OPEN ELECTIVE -(MOOC)	CR	03	-	02	-	04	*	***
3	224	21MCAXXXX	OPEN ELECTIVE(MOOC)	CR	03	-	02	-	04	*	***
4	224	21MCA4404	DISSERTATION	CR	-	-	10	-	05	*	***
					09	-	16	-	17		

COURSE CODE	DEPARTMENT ELECTIVES IV
21MCA4401	INFORMATION SECURITY
21MCA4402	INTRODUCTION TO SOCIAL NETWORK ANALYSIS
21MCA4403	DEEP LEARNING
21MCA4405	BLOCK CHAIN TECHNOLOGY

COURSE CODE	LIST OF OPEN ELECTIVES
21MCA4406	BUSINESS DATA ANALYTICS
21MCA4407	INDUSTRIAL SAFETY
21MCA4408	OPERATIONS RESEARCH
21MCA4409	COST MANAGEMENT OF ENGINEERING PROJECTS
21MCA4410	COMPOSITE MATERIALS
21MCA4411	WASTE TO ENERGY

