Dr. D. Y. Patil Vidyapeeth, Pune (Deemed to be University)

Re-accredited by NAAC with a CGPA of 3.64 on a four-point scale at 'A++' Grade an ISO 9001: 2015 Certified University

Sant Tukaram Nagar Pimpri, Pune – 411018

Centre for Online Learning
Program Structure Master of Computer Application (MCA)

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The Components of the Program

Programme Credit Summary

Programme - Year	Credits	NCrF / NHEQF Level	Learners Engagement (Hrs)
Master of Computer Application (MCA) - II Year	80	6 (Ist year) and 6.5 (IInd year)	2400

Summary (Semester Wise)

Semester	Total Credits	Total Courses	Total Marks
I	20	6	500
II	20	6	500
III	20	6	500
IV	20	3+ 1Research Project	500
Total	80	21 + 1 Research Project	2000

Course Code and Definitions

Course Code	Course Type
DCC	Domain Core Course
AEC	Ability Enhancement Courses
SEC	Skill Enhancement Courses

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Programme Title: Master of Computer Application (MCA)
Programme Structure

MCA First Year - Semester – I

Course Type	Course Code	Course Title	Credit	Assessment			Learner's Engagement
				Formative	Summative	Total	
DCC	OMCA 101	Computer Organization and Architecture	4	30	70	100	120 Hrs
DCC	OMCA 102	Data Structure Using C	4	30	70	100	120 Hrs
DCC	OMCA 103	Object Oriented Programming Using C++	4	30	70	100	120 Hrs
AEC	OMCA 104	Discrete Mathematics and Combinatorics	4	30	70	100	120 Hrs
AEC	OMCA 105	Lab - OOPS using C++	2	50	-	50	60 Hrs
SEC	OMCA 106	Business Communication	2	50	-	50	60 Hrs
Total Credits			**20**			**500**	

MCA First Year - Semester – II

Course Type	Course Code	Course Title	Credit	Assessment			Learner's Engagement
				Formative	Summative	Total	
DCC	OMCA 201	Database Management System	4	30	70	100	120 Hrs
DCC	OMCA 202	Full Stack Web Development	4	30	70	100	120 Hrs
DCC	OMCA 203	Software Engineering	4	30	70	100	120 Hrs
DCC	OMCA 204	Data Communication and Computer Networks	4	30	70	100	120 Hrs
AEC	OMCA 205	Lab - DBMS	2	50	-	50	60 Hrs
AEC	OMCA 206	Lab - Full Stack Web Development	2	50	-	50	60 Hrs
Total Credits			**20**			**500**	

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MCA Second Year - Semester – III

Course Type	Course Code	Course Title	Credit	Assessment			Learner's Engagement
				Formative	Summative	Total	
DCC	OMCA 301	Core and Advance Java	4	30	70	100	120 Hrs
DCC	OMCA 302	Python Programming	4	30	70	100	120 Hrs
DCC	OMCA 303	Advanced Cloud Computing	4	30	70	100	120 Hrs
DCC	OMCA 304	Basics of Artificial Intelligence & Machine Learning	4	30	70	100	120 Hrs
AEC	OMCA 305	Lab - Java & Python Programming	2	50	-	50	60 Hrs
AEC	OMCA 306	Environment Awareness and Disaster Management	2	50	-	50	60 Hrs
Total Credits			**20**			**500**	

MCA Second Year - Semester – IV

Course Type	Course Code	Course Title Type as per NEP	Credit	Assessment			Learner's Engagement
				Formative	Summative	Total	
DCC	OMCA 401	Business Analytics	4	30	70	100	120 Hrs
DCC	OMCA 402	Basics of Blockchain Technology	4	30	70	100	120 Hrs
DCC	OMCA 403	Cyber Laws & Hacking	4	30	70	100	120 Hrs
DCC	OMCARP 404	Research Project	8	-	200	200	240 Hrs
Total Credits			**20**			**500**	