

SANKALCHAND PATEL UNIVERSITY, VISNAGAR

Faculty of Computer Science



Structure, Teaching Scheme and Syllabus of Master of Computer Application (MCA)

Program Code: CS201

With effect from: 2023-24

Program Out Comes:

P01	Computational Knowledge	Apply knowledge of computing fundamentals, computing specialization, mathematics, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualisation of computing models from defined problems and requirements.
P02	Problem Analysis	Identify, formulate, research literature, and solve <i>complex</i> computing problems reaching substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines.
P03	Design /Development of Solutions	Design and evaluate solutions for <i>complex</i> computing problems, and design and evaluate systems, components, or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
P04	Conduct Investigations of Complex Computing Problems	Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
P05	Modern Tool Usage	Create, select, adapt and apply appropriate techniques, resources, and modern computing tools to <i>complex</i> computing activities, with an understanding of the limitations
P06	Professional Ethics	Understand and commit to professional ethics and cyber regulations, responsibilities, and norms of professional computing practice
P07	Life-long Learning	Recognise the need, and have the ability, to engage in independent learning for continual development as a computing professional.

P08	Project management and finance	Demonstrate knowledge and understanding of the computing and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
P09	Communication Efficacy	Communicate effectively with the computing community, and with society at large, about <i>complex</i> computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions.
P010	Societal and Environmental Concern	Understand and assess societal, environmental, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practice
P011	Individual and Team Work	Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary environments.
P012	Innovation and Entrepreneurship	Identify a timely opportunity and using innovation to pursue that opportunity to create value and wealth for the betterment of the individual and society at large.

Program Specification Outcomes:

PSO 1: Design, develop and implement interdisciplinary application software projects to meet the demands of industry requirements using modern tools and technologies.

PSO 2: Analyses the societal needs to provide novel solutions through technological based research.

Program Name: Master of Computer Application

Abbreviation Name: MCA

Semester: 1

Program Code: CS201

With effect from: 2023-24

[illegible]

Program Name: Master of Computer Application

Abbreviation Name: MCA

Semester: 2

Program Code: CS201

With effect from: 2023-24

[illegible]

List of Elective-I Courses

Sr. No.	Course Code	Course Name	Credit
1	3CS2010204T	Programming with Python	4
2	3CS2010205T	Image Processing	4
3	3CS2010206T	Cloud Computing	4

List of Elective-I Courses Practical

Sr. No.	Course Code	Course Name	Credit
1	3CS2010204P	Programming with Python Practical	3
2	3CS2010205P	Image Processing Practical	3
3	3CS2010206P	Cloud Computing Practical	3

List of Elective-II Courses

Sr. No.	Course Code	Course Name	Credit
1	3CS2010207T	Open-Source Technology using PHP	4
2	3CS2010208T	Big Data Analytics	4
3	3CS2010209T	Information Retrieval (IR)	4

List of Elective-II Courses Practical

Sr. No.	Course Code	Course Name	Credit
1	3CS2010207P	Open-Source Technology using PHP Practical	3
2	3CS2010208P	Big Data Analytics Practical	3
3	3CS2010209P	Information Retrieval (IR) Practical	3

List of Elective-III Courses

Sr. No.	Course Code	Course Name	Credit
1	3CS2010304T	Machine Learning	4
2	3CS2010305T	Advanced Networking	4
3	3CS2010306T	Internet of Things (IoT)	4

List of Elective-III Courses Practical

Sr. No.	Course Code	Course Name	Credit
1	3CS2010304P	Machine Learning Practical	3
2	3CS2010305P	Advanced Networking Practical	3
3	3CS2010306P	Internet of Things Practical (IoT)	3

List of Elective-IV Courses

Sr. No.	Course Code	Course Name	Credit
1	3CS2010307T	Application Development using LARAVEL	4
2	3CS2010308T	Advanced Python	4
3	3CS2010309T	Digital Marketing	4

List of Elective-IV Courses Practical

Sr. No.	Course Code	Course Name	Credit
1	3CS2010307P	Application Development using LARAVEL Practical	3
2	3CS2010308P	Advanced Python Practical	3
3	3CS2010309P	Digital Marketing Practical	3

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Semester: 4

Program Code: CS201

With effect from: 2023-24

Course Code	Course Name	Type of Course	Credit	Hours per week				Theory (Marks)				Practical (Marks)				Total (Marks)
				L	T	P	Total	University Assessment		Continuous Assessment		University Assessment		Continuous Assessment		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
3CS2010401P	System Development Project	-	30	-	-	30	30	-	-	-	-	140	350	140	350	700
Total			30	-	-	30	30	-	-	-	-	140	350	140	350	700