

SANKALCHAND PATEL UNIVERSITY, VISNAGAR

Faculty of Computer Science



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

Program Code: CS301

With effect from: 2023-24

Program Outcomes:

P01	Computational Knowledge	Apply knowledge of computing fundamentals, computing specialization, mathematics, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization 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	Recognize 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



Faculty of Computer Science

Program Name: Integrated Master of Computer Application
Abbreviation Name: IMCA
Semester: III

Program Code: CS301
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.	
1CS3010301T	Object Oriented Programming with C++	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
1CS3010302T	Web Design Technology	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
1CS3010303T	Data Structure-I	-	3	3	-	-	3	24	60	16	40	-	-	-	-	100
1CS3010304T	Database Management System-II	-	3	3	-	-	3	24	60	16	40	-	-	-	-	100
1CS3010305T	Operations Research	-	4	3	1	-	4	24	60	16	40	-	-	-	-	100
1CS3010301P	Object Oriented Programming with C++ Practical	-	3	-	-	3	3	-	-	-	-	10	25	10	25	50
1CS3010302P	Web Design Technology Practical	-	3	-	-	3	3	-	-	-	-	10	25	10	25	50
1CS3010303P	Data Structure-I Practical	-	3	-	-	3	3	-	-	-	-	10	25	10	25	50
1CS3010304P	Database Management System-II Practical	-	3	-	-	3	3	-	-	-	-	10	25	10	25	50
1CS3010306P	Hardware Configuration & Solutions *	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-
Total			30	17	1	14	32									700

Note: * Indicate Non-Credit Subject



Faculty of Computer Science

Program Name: Integrated Master of Computer Application
Abbreviation Name: IMCA
Semester: IV

Program Code: CS301
With Effect From: 2023-24

[illegible]

Faculty of Computer Science

Program Name: Integrated Master of Computer Application
Abbreviation Name: IMCA
Semester: VI

Program Code: CS301
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.	
1CS3010601T	Mobile Computing-I	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
1CS3010602T	Machine Learning	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
1CS3010603T	Data Warehouse and Data Mining	-	5	4	1	-	5	24	60	16	40	-	-	-	-	100
1CS3010604T	Web Development with ASP.NET	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
1CS3010605P	Software Project-II	-	4	-	-	4	4	-	-	-	-	20	50	20	50	100
1CS3010601P	Mobile Computing-I Practical	-	3	-	-	3	3	-	-	-	-	10	25	10	25	50
1CS3010602P	Machine Learning Practical	-	3	-	-	3	3	-	-	-	-	10	25	10	25	50
1CS3010604P	Web Development with ASP.NET Practical	-	3	-	-	3	3	-	-	-	-	10	25	10	25	50
1CS3010606T	Research Methodology*	-	-	2	-	-	2	-	-	-	-	-	-	-	-	-
Total			30	18	01	13	32									650

Note: * Indicate Non-Credit Subject



Faculty of Computer Science

Program Name: Integrated Master of Computer Application

Abbreviation Name: IMCA

Semester: VII

Program Code: CS301

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.	
1CS3010701T	Mobile Computing-II	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
1CS3010702T	Cyber Security	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
1CS3010703T	Software Testing	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
	Elective-I	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
1CS3010707T	Environmental Studies	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
1CS3010708P	Software Project-III	-	4	-	-	4	4	-	-	-	-	20	50	20	50	100
1CS3010701P	Mobile Computing-II Practical	-	3	-	-	3	3	-	-	-	-	10	25	10	25	50
1CS3010702P	Cyber security Practical	-	3	-	-	3	3	-	-	-	-	10	25	10	25	50
Total			30	20	0	10	30									700

List of Elective-I Courses

Sr. No.	Course Code	Course Name	Credit
1	1CS3010704T	Block Chain Technology	4
2	1CS3010705T	Web User Interface Design	4
3	1CS3010706T	Internet of Things	4

Faculty of Computer Science

Program Name: Integrated Master of Computer Application

Abbreviation Name: IMCA

Semester: VIII

Program Code: CS301

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.	
1CS3010801T	Big Data Analytics	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
1CS3010802T	Advanced Machine Learning	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
1CS3010803T	Introduction to Search Engine Optimization	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
1CS3010804T	Technical Writing	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
	Elective-II	-	4	4	-	-	4	24	60	16	40	-	-	-	-	100
1CS3010808P	Software Project-IV	-	4	-	-	4	4	-	-	-	-	20	50	20	50	100
1CS3010801P	Big Data Analytics Practical	-	3	-	-	3	3	-	-	-	-	10	25	10	25	50
1CS3010802P	Advanced Machine Learning Practical	-	3	-	-	3	3	-	-	-	-	10	25	10	25	50
Total			30	20	0	10	30									750

List of Elective-II Courses

Sr. No.	Course Code	Course Name	Credit
1	1CS3010805T	Digital Marketing	4
2	1CS3010806T	Cyber Forensic	4
3	1CS3010807T	Embedded System Design	4

List of Elective-III Courses

Sr. No.	Course Code	Course Name	Credit
1.	1CS3010904T	Flutter Application Development	4
2.	1CS3010905T	Cross Platform Mobile Development Using React Native	4
3.	1CS3010906T	iOS Programming	4

List of Elective-III Courses Practical

Sr. No.	Course Code	Course Name	Credit
1.	1CS3010904P	Flutter Application Development Practical	3
2.	1CS3010905P	Cross Platform Mobile Development Using React Native Practical	3
3.	1CS3010906P	iOS Programming Practical	3



Faculty of Computer Science

Program Name: Integrated Master of Computer Application

Abbreviation Name: IMCA

Semester: X

Program Code: CS301

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.	
1CS3011001T	Industrial Project	-	30	-	-	30	30	-	-	-	-	140	350	140	350	700
Total			30	0	0	30	30	-	-	-	-	140	350	140	350	700

