Program Outcomes – MCA

PO 1: **Computational Knowledge:** Apply knowledge of computing fundamentals, computing specialisation, mathematics, and domain knowledge appropriate for the computing specialisation to the abstraction and conceptualisation of computing models from defined problems and requirements.

PO 2: **Problem Analysis:** Identify, formulate, research literature, and solve complex computing problems reaching substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines.

PO 3: **Design /Development of Solutions:** Design and evaluate solutions for complex 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.

PO 4: **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.

PO 5: **Modern Tool Usage:** Create, select, adapt and apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations.

PO 6: **Professional Ethics:** Understand and commit to professional ethics and cyber regulations, responsibilities, and norms of professional computing practices.

PO 7: **Life-long Learning:** Recognise the need, and have the ability, to engage in independent learning for continual development as a computing professional.

PO 8: **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.

PO 9: **Communication Efficacy:** Communicate effectively with the computing community, and with society at large, about complex computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions.

PO 10: **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 practices.

PO 11: **Individual and Team Work:** Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary environments.

PO 12: **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 Specific Outcomes – MCA

PSO 1: Ability to understand and apply knowledge on analysis, design and development of software applications.

PSO 2: Utilize skills and knowledge for computing practice with commitment on social, ethical and legal values.

PSO 3: Ability to work with latest computing technologies and pursue careers in IT industry/ consultancy/ research and development, teaching and allied areas.

Mapping of Courses to PO/PSO – Master of Computer Applications (MCA)

SEMESTER I				
Type	**Course Code**	**Mapping Code**	**Course Name**	**Credits**
Theory	CAMF0043	1.1	Mathematical Foundation for Computer Science	4
	CATC0048	1.2	Theory of Computation	4
	CAOS0016	1.3	Operating Systems	4
	CADA0044	1.4	Data Structures and Algorithms	4
	CAJP0018	1.5	Programming Through Java	4
Lab	CAOS6012	1.6	Operating Systems Lab	2
	CADA0033	1.7	Data Structures and Algorithms Lab	2
	CAPJ6014	1.8	Programming Through Java Lab	2

				26
SEMESTER II				
Type	**Course Code**	**Mapping Code**	**Course Name**	**Credits**
Theory	CASE0019	2.1	Software Engineering	4
	CACC0045	2.2	Data Communication and Computer Networks	4
	CADM0046	2.3	Advanced Database Management Systems	4
	CAIT0022	2.4	Internet Technology and Applications	4
	CASI0047	2.5	Sensor Networks and Internet of Things	3
Lab	CACC6034	2.6	Data Communication and Computer Networks Lab	2
	CAIT6017	2.7	Internet Technology and Applications Lab	2
	CADM6035	2.8	Advanced Database Management Systems Lab	2
	CASL0036	2.9	Constitution of India	
				25
SEMESTER III				
Type	**Course Code**	**Mapping Code**	**Course Name**	**Credits**
Theory	CAPA0030	3.1	Principles of Artificial Intelligence	4
	CADS0049	3.2	Data Science	4
	CASC0050	3.3	Soft Computing	3

	ECRM0042	3.4	Research Methodology and IPR	2
		3.5	**Elective I**	4
		3.6	**Elective II**	4
Lab	CAAI6024	3.7	Principles of Artificial Intelligence Lab	2
	CADS6037	3.8	Data Science Lab	2
Project		3.9	Minor Project - MCA	4
Audit Courses	LSCS0016	3.10	Communication Skills and Professional Ethics	NC
	CMES0023	3.11	Entrepreneurship	NC
	EDCI0100	3.12	Service Learning/Community Engagement	NC
				29
SEMESTER IV				
Type	**Course Code**		**Course Name**	**Credits**
Project	CAMP6039	4.1	Major Project - MCA	18
		4.2	**Elective III**	2
				20
			Total Credits	**100**

Mapping of Courses to PO/PSO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1.1	H	M		L											L
1.2	H	M		L									M		L
1.3		L	H		M								H		
1.4	M	H	M										H		L
1.5	M		H		H								H		M
1.6		L	H		M								H		
1.7	M	H	M										H		L
1.8	M		H		H								H		M
2.1			H					M					H		M
2.2	H		M		M							L		L	M
2.3	H		M		M							L		L	M

2.4			H						L			M		L	H
2.5	M		H		H					M		M			H
2.6	H		M		M							L		L	M
2.7			H						L			M		L	H
2.8	H		M		M							L		L	M
2.9										M				M	
3.1	H	M	H	H	M							M	L		H
3.2	H	M	M	M	L							M	L		H
3.3	H	M	M	M	L							M	L		H
3.4		M		H	M		M								M
3.5	M		H		H							M	M	L	M
3.6	M		H		H							M	M	L	M
3.7	H	M	H	H	M							M	L		H
3.8	H	M	M	M	L							M	L		H
3.9	M	L	H		H		M	M			M	H	H	M	M
3.10						H			H						M
3.11			M					L			M	H	M	L	
3.12						M			L	H	M			H	
4.1	M	L	H		H		M	M			M	H	H	M	M
4.2	L		M			M		H	L						M