

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Faculty of Management Studies**  
**Board of Studies in Computer Applications and Systems Studies**  
**AKIMSS, Solapur**  
**MCA 2022 NEP Program: Attainment of Program Outcomes (POs): 2023 Cohort**

Sr. No.	Faculty	Code
	Faculty of Management Studies	
1	Master of Computer Applications (MCA): 2022 NEP Program	

<b>Bharati Vidyapeeth (Deemed to be University), Pune</b>
<b>Abhijeetdada Kadam Institute of Management &amp; Social Sciences, Solapur</b>

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Program		Code													
Master of Computer Applications (MCA): 2022 NEP Program															
Semester	Course/Subject	Code													
I	Applied Database Management Systems	101													
	Computer Networks	102													
	Java Programming	103													
	Computational Statistics	104													
	Management Concepts & Applications	105													
	Lab on Applied Database Management Systems	106													
	Lab on Java Programming	107													
	MOOCS - I	108													
	Open Course - I (Any one)														
	Universal Human Values	109A													
	Cyber Security	109B													
Soft Skills	109C														
II	Object Oriented Software Engineering	201													
	Cloud Computing Concepts	202													
	Data Structures using Python	203													
	Data Warehousing & Data Mining	204													
	Web Supporting Technologies	205													
	Lab on Data Structures using Python	206													
	Minor Project - 1	207													
	MOOCS - II	208													
	Open Course - II (Any one)														
	Foreign Language	209A													
	Digital Technology	209B													
Human Psychology at Workplace	209C														
III	Software Design Patterns	301													
	Artificial Intelligence	302													
	Information Security	303													
	EL-GRP-1 (A)	304	01A	02A	03A	04A	05A	06A	07A	08A	09A	10A	11A	12A	
	EL-GRP-2 (A)	305	01A	02A	03A	04A	05A	06A	07A	08A	09A	10A	11A	12A	
	Lab on Software Testing	306													
	Minor Project - 2	307													
	MOOCS - III	308													
	Open Course - III (Any one)														
	Social Change in Technology	309A													
	Water Management	309B													
Economics for IT Industry	309C														
IV	Seminar on Recent Trends in IT	401													
	EL-GRP-1 (B)	402	01B	02B	03B	04B	05B	06B	07B	08B	09B	10B	11B	12B	
	EL-GRP-2 (B)	403	01B	02B	03B	04B	05B	06B	07B	08B	09B	10B	11B	12B	
	Major Internship Project	404													

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	<b>Program</b>	<b>Code</b>
	Master of Computer Applications (MCA): 2022 NEP Program	
<b>Elective Group</b>	<b>Cloud Computing</b>	<b>Code</b>
<b>01</b>	Virtualization	01A
	AWS	01B
<b>Elective Group</b>	<b>Data Science</b>	<b>Code</b>
<b>02</b>	Statistical Programming in R	02A
	Introduction to Data Science	02B
<b>Elective Group</b>	<b>Linux</b>	<b>Code</b>
<b>03</b>	Linux Desktop Environment, Shell	03A
	Programming & System Administration	03B
<b>Elective Group</b>	<b>Open Source Technologies</b>	<b>Code</b>
<b>04</b>	Perl Scripting	04A
	Ruby	04B
<b>Elective Group</b>	<b>Mobile Computing</b>	<b>Code</b>
<b>05</b>	Java Script	05A
	Android	05B
<b>Elective Group</b>	<b>Dot Net Technologies</b>	<b>Code</b>
<b>06</b>	C# Programming & Applications	06A
	ASP Dot Net with MVC	06B
<b>Elective Group</b>	<b>Net Centric Technologies</b>	<b>Code</b>
<b>07</b>	HTML 5	07A
	AJAX Programming	07B
<b>Elective Group</b>	<b>Information Systems</b>	<b>Code</b>
<b>08</b>	Recommender System	08A
	Knowledge Management	08B
<b>Elective Group</b>	<b>IOT</b>	<b>Code</b>
<b>09</b>	IoT Architecture Sensors & Fundamentals with Hands-on lab	09A
	Internet of Things: Sensing & Actuator Devices and Smart City Use Case	09B
<b>Elective Group</b>	<b>Big Data</b>	<b>Code</b>
<b>10</b>	Introduction to Big Data	10A
	Business Intelligence Tools With Hadoop	10B
<b>Elective Group</b>	<b>Cyber Security</b>	<b>Code</b>
<b>11</b>	Introduction to Information Security	11A
	Information Security Threats & Mitigation Strategies	11B
<b>Elective Group</b>	<b>Data Management</b>	<b>Code</b>
<b>12</b>	Data Management Environment	12A
	Industrial Data Management & Security	12B

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<b>Program Outcome Code</b>	<b>Domain</b>	<b>Program Outcome Statement</b> <i>Our graduates</i>
<b>PO 1</b>	Computational Knowledge	Apply knowledge of computing fundamentals, mathematics and given domain to design appropriate models for a given problem and/or requirements.
<b>PO 2</b>	Problem Analysis	Apply fundamental knowledge of software engineering and various systems domain to analyze, identify, formulate and provide solutions to problems.
<b>PO 3</b>	Design / Development of Solutions	Design and evaluate solutions, systems, modules and processes for specified set of needs with appropriate consideration of societal values and industry expectations.
<b>PO 4</b>	Conduct Research in 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.
<b>PO 5</b>	Modern Tool Usage	Use modern tools for delivering milestones like problem analysis, design, development, testing and deployment.
<b>PO 6</b>	Professional Ethics	Learn and inculcate professional ethics, cyber regulations, professional responsibilities and norms of professional computing world.
<b>PO 7</b>	Life-long Learning	Acknowledge the need for continuous professional development and practice it through self-motivated, independent learning.
<b>PO 8</b>	Management Domain	Involving in projects development as individual or group to solve problems in various domains and environments using computational and management skills.
<b>PO 9</b>	Communication Efficacy	Demonstrate efficacy in verbal and non-verbal means of communication like reports, design documentation and presentations to elaborate about complex computing.
<b>PO 10</b>	Innovation & Entrepreneurship	Provide conducive environment for innovation and entrepreneurship leading to solutions for betterment of society.

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Program Outcome Code	Program Outcome Statement <i>Our graduates</i>	Attainment Summary (%) 2023 Cohort	
		Target <sup>^</sup>	Actual <sup>*</sup>
PO 01	Apply knowledge of computing fundamentals, mathematics and given domain to design appropriate models for a given problem and/or requirements.	80	92
PO 02	Apply fundamental knowledge of software engineering and various systems domain to analyze, identify, formulate and provide solutions to problems.	80	92
PO 03	Design and evaluate solutions, systems, modules and processes for specified set of needs with appropriate consideration of societal values and industry expectations.	80	92
PO 04	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.	80	92
PO 05	Use modern tools for delivering milestones like problem analysis, design, development, testing and deployment.	80	93
PO 06	Learn and inculcate professional ethics, cyber regulations, professional responsibilities and norms of professional computing world.	80	95
PO 07	Acknowledge the need for continuous professional development and practice it through self-motivated, independent learning.	80	97
PO 08	Involving in projects development as individual or group to solve problems in various domains and environments using computational and management skills.	80	95
PO 09	Demonstrate efficacy in verbal and non- verbal means of communication like reports, design documentation and presentations to elaborate about complex computing.	80	98
PO 10	Provide conducive environment for innovation and entrepreneurship leading to solutions for betterment of society.	80	97

**Note:**

**<sup>^</sup>Target Benchmark: 80% of the students should pass the course.**

**<sup>\*</sup>Actual Passed: The percentage of students that actually passed the course.**

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Program Outcome Code	Program Outcome Statement <i>Our graduates</i>	Attainment (%) 2023 Cohort		Semester I										Semester II												
		Target <sup>^</sup>	Actual <sup>*</sup>	101	102	103	104	105	106	107	108	109A	109B	109C	201	202	203	204	205	206	207	208	209A	209B	209C	
PO 01	Apply knowledge of computing fundamentals, mathematics and given domain to design appropriate models for a given problem and/or requirements.	80	92		94	82	94		97	97			Y			97	84	74	100	100						
PO 02	Apply fundamental knowledge of software engineering and various systems domain to analyze, identify, formulate and provide solutions to problems.	80	92		94	82	94		97	97			Y		74	97	84	74	100	100	100				100	
PO 03	Design and evaluate solutions, systems, modules and processes for specified set of needs with appropriate consideration of societal values and industry expectations.	80	92	84	94	82	94		97	97			Y	100	74	97	84	74	100	100	100				100	
PO 04	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.	80	92		94		94		97				Y			97		74							100	
PO 05	Use modern tools for delivering milestones like problem analysis, design, development, testing and deployment.	80	93		94	82	94		97	97			Y	100		97		74	100						100	
PO 06	Learn and inculcate professional ethics, cyber regulations, professional responsibilities and norms of professional computing world.	80	95		94		94					100	Y	100		97		74						100	100	
PO 07	Acknowledge the need for continuous professional development and practice it through self-motivated, independent learning.	80	97		94		94				Y	100	Y	100		97			100			Y				
PO 08	Involving in projects development as individual or group to solve problems in various domains and environments using computational and management skills.	80	95		94		94	84					Y	100		97					100					100
PO 09	Demonstrate efficacy in verbal and non-verbal means of communication like reports, design documentation and presentations to elaborate about complex computing.	80	98		94		94					100	Y	100		97			100				Y	100	100	
PO 10	Provide conducive environment for innovation and entrepreneurship leading to solutions for betterment of society.	80	97		94		94						Y	100		97									100	

**Note:**  
<sup>^</sup>Target Benchmark: 80% of the students should pass the course.  
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Program Outcome Code	Program Outcome Statement <i>Our graduates</i>	Attainment (%) 2023 Cohort		Semester III																							
		Target <sup>^</sup>	Actual <sup>*</sup>	301	302	303	EL-GRP-1 (A): 304 & EL-GRP-2 (A): 305															306	307	308	309A	309B	309C
							01A	02A	03A	04A	05A	06A	07A	08A	09A	10A	11A	12A									
PO 01	Apply knowledge of computing fundamentals, mathematics and given domain to design appropriate models for a given problem and/or requirements.	80	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y			
PO 02	Apply fundamental knowledge of software engineering and various systems domain to analyze, identify, formulate and provide solutions to problems.	80	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y		Y	Y	Y			
PO 03	Design and evaluate solutions, systems, modules and processes for specified set of needs with appropriate consideration of societal values and industry expectations.	80	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y			
PO 04	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.	80	NA	Y	Y	Y	Y	Y	Y			Y		Y	Y	Y	Y	Y	Y			Y	Y	Y			
PO 05	Use modern tools for delivering milestones like problem analysis, design, development, testing and deployment.	80	NA	Y		Y	Y	Y	Y			Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y			
PO 06	Learn and inculcate professional ethics, cyber regulations, professional responsibilities and norms of professional computing world.	80	NA	Y		Y	Y		Y			Y	Y	Y	Y		Y		Y			Y	Y	Y			
PO 07	Acknowledge the need for continuous professional development and practice it through self-motivated, independent learning.	80	NA	Y		Y	Y	Y	Y			Y		Y		Y				Y		Y	Y	Y			
PO 08	Involving in projects development as individual or group to solve problems in various domains and environments using computational and management skills.	80	NA			Y			Y			Y		Y		Y	Y	Y	Y	Y		Y		Y			
PO 09	Demonstrate efficacy in verbal and non- verbal means of communication like reports, design documentation and presentations to elaborate about complex computing.	80	NA	Y		Y	Y		Y			Y	Y	Y			Y		Y			Y	Y	Y			
PO 10	Provide conducive environment for innovation and entrepreneurship leading to solutions for betterment of society.	80	NA			Y	Y					Y		Y		Y						Y	Y	Y			

**Note:**  
<sup>^</sup>Target Benchmark: 80% of the students should pass the course.  
<sup>\*</sup>Actual Passed: The percentage of students that actually passed the course.

**Note:**  
2023 Cohort has completed 2 semesters of the program. Hence, attainment is calculated for the courses of these 2 semesters only.

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Program Outcome Code	Program Outcome Statement <i>Our graduates</i>	Attainment (%) 2023 Cohort		Semester IV														
		Target <sup>^</sup>	Actual <sup>*</sup>	401	EL-GRP-1 (B): 402 & EL-GRP-2 (B): 403													404
					01B	02B	03B	04B	05B	06B	07B	08B	09B	10B	11B	12B		
PO 01	Apply knowledge of computing fundamentals, mathematics and given domain to design appropriate models for a given problem and/or requirements.	80	NA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
PO 02	Apply fundamental knowledge of software engineering and various systems domain to analyze, identify, formulate and provide solutions to problems.	80	NA		Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	
PO 03	Design and evaluate solutions, systems, modules and processes for specified set of needs with appropriate consideration of societal values and industry expectations.	80	NA		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
PO 04	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.	80	NA	Y	Y	Y	Y				Y	Y	Y	Y			Y	
PO 05	Use modern tools for delivering milestones like problem analysis, design, development, testing and deployment.	80	NA	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	
PO 06	Learn and inculcate professional ethics, cyber regulations, professional responsibilities and norms of professional computing world.	80	NA		Y		Y			Y		Y		Y	Y	Y		
PO 07	Acknowledge the need for continuous professional development and practice it through self-motivated, independent learning.	80	NA		Y		Y		Y			Y		Y	Y	Y		
PO 08	Involving in projects development as individual or group to solve problems in various domains and environments using computational and management skills.	80	NA		Y		Y					Y		Y		Y	Y	
PO 09	Demonstrate efficacy in verbal and non- verbal means of communication like reports, design documentation and presentations to elaborate about complex computing.	80	NA		Y		Y			Y		Y		Y	Y			
PO 10	Provide conducive environment for innovation and entrepreneurship leading to solutions for betterment of society.	80	NA		Y		Y		Y			Y		Y	Y			

**Note:**  
<sup>^</sup>Target Benchmark: 80% of the students should pass the course.  
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