

G. H. Raisoni College of Engineering

(An Autonomous Institute Under UGC Act 1956 &
Affiliated to Rastrasant Tukadoji Maharaj Nagpur University, Ngpur)

Department of Computer Applications,



M.C.A.
SCHEME 2014-15 [AUTONOMOUS]

Computer Applications Department**Vision**

- To Achieve Excellent Standards of Quality Education by Keeping Pace with Rapidly Changing technologies.
- To Create Technical Manpower of Global Standards with Capabilities Of Accepting New Challenges

Mission

- To strive for excellence in development and deployment of computer applications.
- Our efforts will be to impart quality and value based education to raise satisfaction level of all stakeholders.
- Our endeavour will be to provide all possible support to promote research & development Activities.

Program Educational Objectives (PEO)

The educational objectives of master of computer application programme are designed to produce competent professionals. Our graduates shall be able to:

1. Practice computational techniques and develop softwares for integration of existing technology and e-governance.
2. Apply fundamental technical knowledge and skills to provide workable solutions to problems related to computerization of systems.
3. Solve societal and environmentally sensitive problems in professional manner.

Program Outcomes:(PO)

Our students shall be able to:

1. Apply knowledge of computing fundamentals, mathematics and domain knowledge appropriate for computing models from defined problems and requirements.
2. Identify, formulate, and solve complex computing problems and reaching substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines.
3. Design and evaluate solutions for complex computing problems that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
4. Use research methods, analysis, interpretation of data and synthesis of the information to provide valid conclusions.
5. Create, select, adapt and apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations.
6. Recognize the need, and have the ability, to engage in independent learning for continual development as a computing professional.
7. Communicate and function effectively as member of multi disciplinary team with the computing community, and with society at large, being able to comprehend and write effective reports, design documentation, make effective presentations, give and understand clear instructions.
8. Understand and assess societal, environmental, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional ethics.
9. Function as a member of multidisciplinary teams and to understand computing and management principles & finance to manage projects in multidisciplinary environments.

**MCA DEPARTMENT
SCHEME OF MCA**

Sub. Code	Name of the Course	Teaching Scheme				Credits	Evaluation Scheme					Duration ESE (Hrs.)	
		Th.	Tu	Pr.	Total		Theory			Practical			Total
							(TAE) (20)	(CAE) (30)	ESE (50)	Int.	Ext.		
SEM-I													
MCAL201	Computer Architecture & Organization	3	1		4	4	20	30	50			100	03
MCAL202	Fundamentals of programming using C	4	-	-	4	4	20	30	50			100	03
MCAL301	Data Structures using C	3	1	-	4	4	20	30	50			100	03
MCAL203	Digital Electronics	4		-	4	4	20	30	50			100	03
MAML209	Computational Mathematics	4	-		4	4	20	30	50			100	03
MCAP202	Fundamentals of Programming Lab			6	6	3				50	50	100	03
MCAP301	Data Structures Lab			6	6	3				50	50	100	03
	Total	19	2	14	35	26						700	

Sub. Code	Name of the Course	Teaching Scheme				Credits	Evaluation Scheme					Duration ESE (Hrs.)	
		Th.	Tu	Pr.	Total		Theory			Practical			Total
							(TAE) (20)	(CAE) (30)	ES E(50)	Int.	Ext.		
SEM-II													
MCAL204	Operating System	3	1		4	4	20	30	50			100	03
MCAL205	Database Management System	4		-	4	4	20	30	50			100	03
MCAL302	Object Oriented Programming	4		-	4	4	20	30	50			100	03
MBAL211	Introduction to Finance and Business Process Domains	3	1		4	4	20	30	50			100	03
MCAL206	Computer Networks	4			4	4	20	30	50			100	03
MCAP302	Object Oriented Programming Lab			6	6	3				50	50	100	03
MCAP205	Database Management System Lab		-	6	6	3				50	50	100	03
MCAP310	Mini Project			2	2	2					50	50	-
MCAP207	LINUX			2	2	2				25	25	50	-
	Total	20	2	16	38	30						800	

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							Theory		Practical		Total		
		Th.	Tu	Pr.	Total		(TAE) (20)	(CAE) (30)	ES E (50)	Int.	Ext.		
SEM-III													
MCAL303	Software Engineering	4	-	-	4	4	20	30	50			100	03
MCAL401	Object Oriented Analysis & Design	4	-	-	4	4	20	30	50			100	03
MCAL305	Advanced Database Management System	3	1	-	4	4	20	30	50			100	03
MCAL403	Web Programming	4	-		4	4	20	30			50	100	03
MCALXXX	ELECTIVE -1	4	--		4	4	20	30	50			100	03
MCAP401	OOAD LAB			6	6	3				50	50	100	03
MCAP403	Web Programming			6	6	3				50	50	100	03
MCAP410	Minor Project-I			4	4	2					50	50	-
MBL209	General Proficiency-I	1	-	2	3	Audit Course	-	-	-	--		-	-
	Total	20	2	16	38	28						750	

Elective No	Semester	Name of elective
I	III	<ul style="list-style-type: none"> ➤ MCAL411-Cloud Computing Architectures ➤ MCAL412- Mobile Computing ➤ MCAL413- Principals of Management and Organizational Behavior

Sub. Code	Name of the Course	Teaching Scheme				Credits	Evaluation Scheme					Duration ESE (Hrs.)	
							Theory			Practical			Total
		Th.	Tu	Pr.	Total		(TAE) (20)	(CAE) (30)	ESE (50)	Int.	Ext.		
SEM-IV													
MCAL406	E-Commerce	4	-	-	4	4	20	30	50			100	03
MCAL XXX	ELECTIVE II	4	-	-	4	4	20	30	50			100	03
MBAL526	Enterprise Resource Planning	4		-	4	4	20	30	50			100	03
MCAL417	IT INFRASTRUCTURE	4	-	-	4	4	20	30	50			100	03
MCAL405	.NET Framework	4			4	4	20	30	50			100	03
MCAP405	.NET Framework LAB			6	6	3				50	50	100	03
MCAP417	IT INFRASTRUCTURE LAB			6	6	3				50	50	100	03
MCAP510	Minor Project-II			4	4	2					50	50	-
MBL210	General Proficiency-II	2	-	2	2	Audit Course							
	Total	22		16	38	28						750	

Elective No	Semester	Name of elective
II	IV	<ul style="list-style-type: none"> ➤ MCAL414- Cloud Storage Infrastructure ➤ MCAL415 - Mobile Operating System ➤ MCAL416 -Management Information System & Business Intelligence

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		Th.	Tu	Pr.	Total		Theory			Practical			Total
							(TAE) (20)	CAE (30)	ESE (50)	Int.	Ext.		
SEM-V													
MCAL409	Graphical User Interface Design	4	-	-	4	4	20	30	50			100	03
MCAL407	Software Testing & Quality Assurance Design	4	-	-	4	4	20	30	50			100	03
MCAL408	Software Project Management	4		-	4	4	20	30	50			100	03
MCALXXX	Elective –III	4	-	-	4	4	20	30	50			100	03
MCALXXX	Elective – IV	4			4	4	20	30	50			100	03
MCAP407	Software Testing & Quality Assurance Design			6	6	3				50	50	100	03
MCAP522	Tools Lab		-	2	2	Audit Course				G	G	-	-
MCAP517	Minor Project-III (Audit)					Audit Course				G	G		
MCAPXXX	Elective – IV Lab		-	6	6	3				50	50	100	03
	Total	20		14	34	26						700	

Electives:

Elective No	Semester	Name of elective
III	V	❖ MCAL518 -Big Data Analysis
		❖ MCAL519 - Mobile Application Development
		❖ MCAL520 -Information System Auditing
		❖ MCAL521 - SAP- ABAP
IV	V	❖ MCAL513 - MULTIMEDIA & WEB DESIGN
		❖ MCAP513 MULTIMEDIA & WEB DESIGN
		❖ MCAL514 ASP.NET
		❖ MCAP514 ASP.NET
		❖ MCAL515 WEB LOGIC ADMINISTRATION
		❖ MCAP515 WEB LOGIC ADMINISTRATION
		❖ MCAL516 Advanced JAVA
		❖ MCAP516 Advanced JAVA

Sub. Code	Name of the Course	Teaching Scheme				Credits	Evaluation Scheme					Duration ESE (Hrs.)	
		Th.	Tu	Pr.	Total		Theory			Practical			Total
							(TAE)	CAE	ESE	Int.	Ext.		
SEM-VI													
MCAP610	Major Project					22				400	150	550	-
	TOTAL					22				400	150	550	