



**AHMEDABAD UNIVERSITY**

**SCHOOL OF INFORMATION AND COMMUNICATION  
TECHNOLOGY**

**AES INSTITUTE OF COMPUTER STUDIES  
B++ ACCREDITATION BY NAAC OF UGC**

*Empowering Knowledge, Creating Skills*

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**FIRST YEAR MCA SYLLABUS**

**TRIMESTER - II**

**YEAR - 2009 – 2010  
(For Internal Use Only)**



# AHMEDABAD UNIVERSITY

## SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY AES INSTITUTE OF COMPUTER STUDIES

### MCA – Course Structure

FIRST YEAR MCA					
Subject Code	Trimester – I	Subject Code	Trimester – II	Subject Code	Trimester - III
MCA111	Structured Programming using C	MCA121	Data Structures	MCA131	Operating Systems
MCA112	Computer Organization and Architecture	MCA122	Database Management Systems –II	MCA132	Object Oriented Concepts and Programming using C++
MCA113	Database Management Systems-I	MCA123	Programming using C and C++	MCA133	Design and Analysis of Algorithms
MCA114	IT Tools	MCA124	Discrete Mathematics for Computer Science	MCA134	Computer Oriented Numerical and Statistical Methods
		MCA125	Communication Skills	MCA 135	Management Systems
SECOND YEAR MCA					
Subject Code	Trimester – IV	Subject Code	Trimester – V	Subject Code	Trimester – VI
MCA211	Core Java	MCA221	Web Development using ASP.NET	MCA231	TCP/IP Protocol Suite
MCA212	Software Engineering	MCA222	Object Oriented Analysis and Design using UML	MCA232	Open Source Technologies
MCA213	Operations Research	MCA223	Managerial Economics	MCA233	Elective-I
MCA214	Enterprise Application Development using .NET	MCA224	Data Communication and Networking	MCA234	Enterprise Application Development (Project)
MCA215	System Software	MCA225	Seminar		
THIRD YEAR MCA					
Subject Code	Trimester – VII	Subject Code	Trimester - VIII	Subject Code	Trimester – IX
MCA311	Software Project Management	MCA321	Enterprise Applications (ERP, SCM, CRM)	MCA331	System Development Project
MCA312	Mobile Computing	MCA322	Distributed Computing and Service Oriented Architecture (SOA)		
MCA313	Advanced Java	MCA323	Elective-III		
MCA314	Elective-II	MCA324	Web based Application Development (Project)		

Elective-I	Elective-II	Elective-III
1. Artificial Intelligence 2. Linux Administration 3. Computer Graphics 4. Search Engine Optimization	1. Compiler Construction 2. Multimedia Systems 3. Software Quality Management, Testing and Standards	1. Network Security 2. GIS 3. E-Security and Cyber laws 4. Data Warehousing and Data Mining 5. IT Infrastructure Management 6. E-Governance

*Thoughts are the software of the mind.*



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## SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY AES INSTITUTE OF COMPUTER STUDIES

### Teaching Scheme

#### First Year MCA

#### Trimester – I

Subject Code	Subject	Contact hrs/week				Credits
		L	T	P	Total	
MCA111	Structured Programming using C	3	1	4	8	8
MCA112	Computer Organization and Architecture	3	1	-	4	4
MCA113	Database Management System-I	3	1	4	8	8
MCA114	IT Tools (*)	-	-	6	6	-
<b>Total</b>		<b>09</b>	<b>3</b>	<b>14</b>	<b>26</b>	<b>20</b>

\* Non-Credit bridge course

#### Trimester – II

Subject Code	Subject	Contact hrs/week				Credits
		L	T	P	Total	
MCA121	Data Structures	3	1	3	7	7
MCA122	Database Management System-II	3	1	3	7	7
MCA123	Programming using C and C++	3	1	4	8	8
MCA124	Discrete Mathematics for Computer Science	3	1	-	4	4
MCA125	Communication Skills	3	1	-	4	4
<b>Total</b>		<b>15</b>	<b>5</b>	<b>10</b>	<b>30</b>	<b>30</b>

#### Trimester – III

Subject Code	Subject	Contact hrs/week				Credits
		L	T	P	Total	
MCA131	Operating Systems	3	1	3	7	7
MCA132	Object Oriented Concepts and Programming using C++	3	1	4	8	8
MCA133	Design and Analysis of Algorithms	3	1	3	7	7
MCA134	Computer Oriented Numerical and Statistical Methods	3	1	2	6	6
MCA135	Management Systems	3	1	-	4	4
<b>Total</b>		<b>15</b>	<b>5</b>	<b>12</b>	<b>32</b>	<b>32</b>

*Success in doing ordinary things extraordinary well.*



# AHMEDABAD UNIVERSITY

## SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY AES INSTITUTE OF COMPUTER STUDIES

### Examination Scheme

#### First Year MCA

#### Trimester – I

Sr. No.	Subject	Internal Assessment		External Assessment		Total
		Mid-Term	Assignment	Theory	Practical	
MCA111	Structured Programming using C	25	25	50	50	150
MCA112	Computer Organization and Architecture	25	25	50	-	100
MCA113	Database Management Systems-I	25	25	50	50	150
MCA114	IT Tools (*)					
	<b>Total</b>	<b>75</b>	<b>75</b>	<b>150</b>	<b>100</b>	<b>400</b>

\* Non-Credit bridge course

#### Trimester – II

Sr. No.	Subject	Internal Assessment		External Assessment		Total
		Mid-Term	Assignment	Theory	Practical	
MCA121	Data Structures	25	25	50	50	150
MCA122	Database Management System-II	25	25	50	50	150
MCA123	Programming using C and C++	25	25	50	50	150
MCA124	Discrete Mathematics for Computer Science	25	25	50	-	100
MCA125	Communication Skills	25	25	50	-	100
	<b>Total</b>	<b>125</b>	<b>125</b>	<b>250</b>	<b>150</b>	<b>650</b>

#### Trimester – III

Sr. No.	Subject	Internal Assessment		External Assessment		Total
		Mid-Term	Assignment	Theory	Practical	
MCA131	Operating Systems	25	25	50	50	150
MCA132	Object Oriented Concepts and Programming using C++	25	25	50	50	150
MCA133	Design and Analysis of Algorithms	25	25	50	50	150
MCA134	Computer Oriented Numerical and Statistical Methods	25	25	50	50	150
MCA135	Management Systems	25	25	50	-	100
	<b>Total</b>	<b>125</b>	<b>125</b>	<b>250</b>	<b>200</b>	<b>700</b>

*Focused mind power is one of the strongest forces on earth.*

### Evaluation Pattern



## SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY AES INSTITUTE OF COMPUTER STUDIES

- The evaluation of students shall be continuous and dynamic throughout every trimester. Evaluation of students will be on the basis of their performance in the trimester end examination, quality of projects, quality of assignments, participation in case studies and seminar, attendance and class participation.
- A course can be either theory or a combination of theory and practical. Total marks to determine the grade at the end of the trimester will be 100 for a theory only course, 150 for theory with practical, 200 for project work in Trimester VI and VIII and 600 for full time project in Trimester IX.
- The final evaluation in every course will be a combination of internal and external components with different weightage.
- Faculty member will decide the evaluation criteria and weightage for the course at the beginning of each trimester.

### **Internal Evaluation**

The students may be evaluated on the following criteria.

For Mid-Term

- Theory Examination
- Practical Examination with viva
- Unit Test
- Quiz
- Class Participation and Attendance

For Assignment

- Regularity in Termwork Submission
- Presentation
- Seminars
- Case Study
- Problem Analytical Skills
- Debate
- Group Discussion

### **External Evaluation**

The external evaluation shall be done through Written and Practical Examination at the end of Trimester as per the Examination Scheme.

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*Success is a journey, not a destination.*