



JAMAL MOHAMED COLLEGE (AUTONOMOUS)

(Affiliated to Bharathidasan University)

TIRUCHIRAPPALLI – 620 020

NAAC - SSR IV CYCLE

Criterion II – Teaching – Learning and Evaluation

2.3 Teaching - Learning Process

2.3.4. Preparation and adherence to Academic Calendar and Teaching Plans by the institution

Teaching Plans



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(2017-2018)

TEACHING CONTENT: DEPARTMENT OF MICROBIOLOGY

JAMAL MOHAMED COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI - 620 020						
TEACHING PLAN (2017 - 18)			SEMESTER: I			
Department : Microbiology		Class : I - B.Sc.,				
Subject Title with Code : Basic Microbiology (17 UMB1C1)		No. of Hours per Week: 05				
Unit	Topics	Name of the Teaching Staff with Initial	No. of hours required for Completion	Completion before CIA Test - I / II	Signature of the Staff	Remarks of HOD / MID
1.	Introduction to Microbiology - History of Microbiology - Contribution of Antony van Leeuwenhoek, Louis Pasteur, Robert Koch, Edward Jenner, Joseph Lister.	Dr.S.Mohamed Salique	06	CIA - I		
	Winogradsky, Fannie Elshemius and John Tyndall, Theory of spontaneous generation, "Germ theory of disease" and Scope of microbiology, Compound Microscope.		07	CIA - II		
2.	Sterilization and Disinfection: Principles- Methods of Sterilization - Physical methods - Dry heat- Moist heat, Filtration (Membrane & HEPA) - Radiation .	M.Gayathri	06	CIA - I		
	Chemical Sterilization - Chemical agents, Mode of action - "Phenol coefficient test-sterility testing.		07	CIA - II		
3.	Cultivation of Microbes - Nutritional requirements, Nutritional Types of bacteria- Phototrophs, Chemotrophs, Autotrophs, Heterotrophs and Obligate parasites.	M. Mohamed Mahroop Raja	06	CIA - I		

Unit	Topics	Name of the Teaching Staff with Initial	No. of hours required for Completion	Completion before CIA Test - I / II	Signature of the Staff	Remarks of HOD / MID
4.	Media preparation -Solid and Liquid- "Types of Media" -Crude, Semi Synthetic, Synthetic, Enriched, Selective, Differential and Special Type of Media.	M. Mohamed Mahroop Raja	07	CIA - II		
	Pure Cultures and Cultural Characteristics - Selective methods of selection- Chemical, Physical and Biological, Selection in nature. Pure culture techniques - Tube dilution, Pour plate,	Mohamed Mahroop Raja	06	CIA - I		
	Spread plate, Streak plate and Micro manipulator. Anaerobic culture techniques- Wright's tube, Roll tube, "McIntosh Fildes jar method".		07	CIA - II		
5.	Quantitative Measurement of Bacteria - Direct Microscopic Count, Electronic Enumeration of Cell Numbers, The Plate count method, Membrane - Filter Count, "Turbidimetric methods".	M.Gayathri	06	CIA - I		
	Determination of Nitrogen content, Determination of the dry weight of cells, Importance of quantitative measurement of growth.		07	CIA - II		

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TEACHING CONTENT: DEPARTMENT OF COMPUTER SCIENCE

JAMAL MOHAMED COLLEGE (AUTONOMOUS)

TIRUCHIRAPPALLI - 620 020

TEACHING PLAN (2017-2018)

Department	COMPUTER SCIENCE	Class	II MCA	Semester	IV	
Subject title	Core XXI : .Net Technology	Subject code	14MCA4C21	No. of hours per week	4	
Unit	Topics to be taught	Name of the teaching staff with initials	No. of hours required for completion	Completion before CIA Test-I/II	Signature of the staff member	Remarks of HOD / MID
I	Introduction : Integrated Development Environment - IDE Components - Setting Environment Options - Building a Console application -Variable-Variable as Objects - Constants-Arrays.	N. ABDUL KAH	10	TEST-I		
II	Programming Fundamentals : Flow Control Statement-Writing & using procedures - Argument-Built-in Functions -The Textbox control -The List box, Checked List Box and Combo Box Controls-The Scrollbar or Track bar controls.		10	TEST-II		
III	Working With Forms : Appearance of Forms - Loading or showing Forms - Dynamic Forms -Designing Menus - Common Dialog controls - Rich Text box Control -List view, Tree view, or Image List Controls - Handling Strings or characters - Handling Dates or Times - Manipulating Folders or Files -Accessing Files.		6 5	TEST-III TEST-IV		

Unit	Topics to be taught	Name of the teaching staff with initials	No. of hours required for completion	Completion before CIA Test-I/II	Signature of the staff member	Remarks of HOD / MID
IV	ADO .NET : The Basic Data - Access Classes-storing Data in datasets - Update Operations -Working with Typed Datasets - Data Binding - Designing Data Driven Interfaces.	M. ABDUL KAH	11	TEST-V	M. Abdul K	
V	Building Web Applications : Understanding HTML or DHTML- working with HTML - Cascading Style Sheets - Server Side Technologies – Controls - ASP.NET Objects - Understanding Web Services.		10	TEST-VI		

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TEACHING CONTENT: DEPARTMENT OF COMPUTER SCIENCE

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TEACHING PLAN (2017-2018)						
Department	COMPUTER SCIENCE		Class	II MCA		Semester
Subject title	Core XXII: Computer Simulation and Modeling		Subject code	14MC44C22		No. of hours per week
Unit	Topics to be taught	Name of the teaching staff with initials	No. of hours required for completion	Completion before CIA Test-VII	Signature of the staff member	Remarks of HOD / MID
I	Introduction to Simulation: When Simulation is the Appropriate Tool- When Simulation is not Appropriate- Advantages and Disadvantages of Simulation- Areas of Application- Systems and System Environment- Components of a System- Discrete and Continuous Systems- Model of a System- Types of Models- Discrete-Event System Simulation - Steps in a simulation study. Simulation Examples: Simulation of Queuing Systems, Simulation of Inventory Systems.	P.A. Rajkumar S. Anandhan	11	CIA I	P.A. Rajkumar	
II	Simulation Software: History of Simulation Software- Selection of Simulation Software- Simulation in JAVA, Simulation in GPSS, Simulation in SSF- Simulation software - Experimentation and Statistical and analysis tools.	M. Mohamed Sufurthan N.M.S	10	CIA Test 1	M. Mohamed Sufurthan	
III	Statistical Models in Simulation: Review of Terminology and Concepts- Useful Statistical Models- Discrete Distributions	M. Mohamed Sufurthan N.M.S	10	CIA Test 2 + CIA Test 1	M. Mohamed Sufurthan	

Unit	Topics to be taught	Name of the teaching staff with initials	No. of hours required for completion	Completion before CIA Test-VII	Signature of the staff member	Remarks of HOD / MID
III	Continuous Distributions-Poisson process. Queuing models - Characteristics of queuing systems.					
IV	Random-Number Generation: Properties of Random Numbers-Generation of Pseudo-Random Numbers-Techniques for Generating Random Numbers-Linear congruential Method- Random number streams Tests for random numbers-Frequency tests - Test for Autocorrelation. Random-Variate Generation: Inverse Transform Technique-Exponential Distribution-Uniform Distribution-Weibull Distribution.	M. Mohamed Sufurthan N.M.S	11	CIA Test 2	M. Mohamed Sufurthan	
V	Input Modeling: Data Collection - Identifying the Distribution with Data- parameter estimation- goodness of fit tests.Verification and Validation of Simulation Models: Model Building, Verification, and Validation- Verification of Simulation Models- Calibration and Validation of Models.	(P.H.S)	10		P.H. Moudhy	


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TEACHING CONTENT: DEPARTMENT OF COMPUTER SCIENCE

JAMAL MOHAMED COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI - 620 020						
TEACHING PLAN (2017-2018)						
Department	COMPUTER SCIENCE		Class	MCA (Aided)		Semester
Subject title	COMPUTER ORGANIZATION AND ARCHITECTURE		Subject code	17MCAIC3		No. of hours per week
Unit	Topics to be taught	Name of the teaching staff with initials	No. of hours required for completion	Completion before CIA Test-III	Signature of the staff member	Remarks of HOD / MID
I	Number Systems – Decimal, Binary, Octal and Hexadecimal Systems – Conversion from one system to another – Binary Addition, Subtraction, Multiplication and Division – Binary Codes – 8421, 2421, Excess-3, Gray, BCD – #Alphanumeric Codes# – Error Detection Codes.	T. ABDUL KAZI (AK)	12	CIA-I	T. Abdul Kazi	
II	Basic Logic Gates – Universal Logic – Boolean Laws and Theorems – Boolean Expressions – Sum of Products – Product of Sums – Simplification of Boolean Expressions – Karnaugh Map Method (up to 4 Variables) – Implementation of Boolean Expressions using Gate Networks.		10	CIA-II		
III	Combinational Circuits – Multiplexers – Demultiplexers – Decoders – Encoders – Arithmetic Building Blocks – Half and Full Adders – Half and Full Subtractors – Parallel adder – 2's Complement Adder – Subtractor – #BCD Adder#		10	CIA-III		

Unit	Topics to be taught	Name of the teaching staff with initials	No. of hours required for completion	Completion before CIA Test-III	Signature of the staff member	Remarks of HOD / MID
IV	Sequential Circuits – Flip Flops – RS, Clocked RS, D, JK, T and Master-Slave Flip Flops – Shift Register – Counters – Asynchronous, MOD-n and Synchronous Counters – BCD Counter – Ring Counter.	T. ABDUL KAZI (AK)	10	CIA-IV	T. Abdul Kazi	
V	Central Processing Unit: General Register Organization – Stack Organization – Instruction Formats – Addressing Modes – #Data Transfer and Manipulation# – Program Control – Reduced Instruction Set Computer – CISC characteristics – RISC Characteristics.		10	CIA-V		


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TEACHING CONTENT: DEPARTMENT OF COMPUTER SCIENCE

JAMAL MOHAMED COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI - 620 020						
TEACHING PLAN (2017-2018)						
Department	Computer Science		Class	III B.Sc. (Aided)		Semester
Subject title	Core XIII : Computer Networks		Subject code	14UCS6C13		No. of hours per week
Unit	Topics to be taught	Name of the teaching staff with initials	No. of hours required for completion	Completion before CIA Test-I/II	Signature of the staff member	Remarks of HOD / MID
I	Introduction – Uses of Computer Networks – Network Hardware – Network Software: Protocol Hierarchies – Design Issues for the Layers – Connection Oriented and Connectionless Services – Service Primitives Reference models: The OSI Reference Model – TCP/IP Reference Model.	G. RAVI	13	CIA-I		
II	The Physical Layer: Guided Transmission Media – Public Switched Telephone Network – Structure of Telephone System – Trunks and Multiplexing – Switching – The Data Link Layer: Data link layer Design Issues – Error Detection and Correction – Stop and Wait Protocol – Sliding Window Protocols.	G. RAVI	13	CIA-II		
III	The Network Layer: The Network Layer Design Issues – Routing Algorithms: The Optimality Principle – Shortest Path Routing – Flooding – Distance Vector Routing – Link State Routing – Hierarchical Routing	S SYED JIBRAHIM	13	CIA-I		

Unit	Topics to be taught	Name of the teaching staff with initials	No. of hours required for completion	Completion before CIA Test-I/II	Signature of the staff member	Remarks of HOD / MID
III	Broadcast Routing – Congestion Control Algorithms: General Principles of Congestion Control – Congestion Prevention Policies – Congestion Control in Virtual-Circuit Subnets and Datagram Subnets – Network Layer in the Internet: IP Protocol – IP addresses.	SI	15	CIA-I		
IV	The Transport Layer: The Transport Service – Elements of Transport Protocols – Internet Transport Protocols: Introduction to UDP – RPC – TCP: TCP Service Model – TCP Protocol – TCP Segment Header	SI	15	CIA-II		
V	The Application Layer: The DNS Name Space – E-mail: Architecture and Services – Message Formats – Network Security: Cryptography – DES – RSA – Communication Security: Firewalls – Virtual Private Networks.	PHS	15			

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TEACHING PLAN (2017-2018)							
Department	COMPUTER SCIENCE			Class	I MCA		Semester
Subject title	PRINCIPLES OF OPERATING SYSTEMS			Subject code	17MCA2018		No. of hours per week
Unit	Topics to be taught	Name of the teaching staff with initials	No. of hours required for completion	Completion before CIA Test-III	Signature of the staff member	Remarks of HOD / MID	
I	Operating Systems Objectives and Functions. Operating System and User / Computer Interface. Operating System as a Resource Manager. Evolution of Operating Systems. #Serial Processing#, Simple Batch Systems, Multi Programmed Batch Systems, Time Sharing Systems.	D.I. George Amalawathan (DIL)	11				
II	Process Description, Process Control, Processes and Threads, Concurrency, Principles of Concurrency, Mutual Exclusion, Deadlock, Prevention, Deadlock Detection, Deadlock Avoidance, Memory Management, #Memory Management Requirements#, Fixed Partitioning, Placement algorithm, Relocation in a Paging System, Simple Segmentation.		11	CIA-I			
III	Virtual Memory, Paging, Address Translation in a Paging System, Segmentation, Organization, Address Translation in a Segmentation System.		6				

Unit	Topics to be taught	Name of the teaching staff with initials	No. of hours required for completion	Completion before CIA Test-III	Signature of the staff member	Remarks of HOD / MID	
III	Combined Paging and Segmentation – #Virtual Memory# – Operating System Software – Fetch Policy, Placement Policy and Replacement Policy.	D.I. George Amalawathan (DIL)	4				
IV	Scheduling – Types of Scheduling, Scheduling Algorithms, Scheduling Criteria, FIFO, Round Robin, Shortest Process Next, Shortest Remaining Time, Feedback Scheduling – Fairshare Scheduling.		10				
V	I/O Management and disk scheduling – Organization of the I/O function – the Evaluation of the I/O Function, Logical Structure of the I/O Function, I/O Buffering, Disk I/O – Disk Scheduling Algorithms, Disk Cache, File Management – Files, File Management Systems, Secondary Storage Management – #File Allocation#.		10	CIA-II			

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