

GOVERNMENT POLYTECHNIC COLLEGE, KOTA (RAJ.)

SYLLABUS BREAK-UP (SESSION 2015-16)

SUBJECT CODE : CH / IE/ ME210

SUBJECT NAME : 'C' PROGRAMMING

FACULTY NAME : MUKUL KULSHRESTHA

DESIGNATION : LECTURER (COMPUTER SC. & ENGG.)

TOPIC	LECTURE / PRACTICAL CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC	REASON FOR NOT COVERING THE TOPIC IN DUE TIME	E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC
1. Introduction: 1.1 Scope of 'C' Language 1.2 Distinction and similarities with other HLLs	2	August			
1.3 Special features and Application areas	1	August			
2. Elements of 'C' : 2.1 Character set 2.2 Key words 2.3 Data types	1	August			
2.4 Constants and Variables	1	August			
2.5 Operators: unary, binary, ternary 2.6 Operator precedence	2	September			
3. Console Input-Output: 3.1 Types of I-O 3.2 Console I-O	1	September			
3.3 Unformatted console I-O: getchar(), putchar(), gets(), puts(), getch(), getche()	2	September			
3.4 Formatted I-O: scanf(), printf()	2	September			
4. Control Flow : 4.1 Statements and blocks	1	October			
4.2 if	3	October			
4.3 switch	1	October			
4.4 Loops: for, while, do-while	2	October			
4.5 goto and labels 4.6 break, continue, exit	1	October			
4.7 Nesting control statements	2	October			
5. Arrays : 5.1 Basic concepts 5.2 Memory representation	1	November			
5.3 One dimensional array	3	November			
5.4 Two dimensional array	3	November			
6. Functions : 6.1 Basic concepts	2	December			
6.2 Declaration and prototypes	1	December			
6.3 Calling	2	December			

6.4 Arguments 6.5 Scope rules	2	December			
6.6 Recursion	2	January			
6.7 Storage classes types 6.8 Library of functions: math, string, system	2	January			
7. Pointers : 7.1 Basic concepts 7.2 &, * operator	2	January			
7.3 Pointer expression: assignment, arithmetic, comparison	3	February			
7.4 Dynamic memory allocation 7.5 Pointer v/s Arrays	3	February			
8. Structure and Enumerated Data Types : 8.1 Basic concepts	1	February			
8.2 Declaration and memory map	2	March			
8.3 Elements of structures	2	March			
8.4 Enumerated data types : typedef, enum	2	March			
8.5 Union	2	April			
Revision Work & problem solving	3	April			
TOTAL	60				

GOVERNMENT POLYTECHNIC COLLEGE, KOTA (RAJ.)

SYLLABUS BREAK-UP (SESSION 2015-16)

SUBJECT CODE : CH \ IEVME 210 I

SUBJECT NAME : C Programming

FACULTY NAME : MUKUL KULSHRESTHA

DESIGNATION : LECTURER (COMPUTER SC. & ENGG.)

TOPIC	LECTURE / PRACTICAL CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC	REASON FOR NOT COVERING THE TOPIC IN DUE TIME	E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC
1. Problems based on arithmetic expression, fixed mode arithmetic.	14	August, September			
2. Problems based on conditional statements and control structures.	16	October, November			
3. Problems based on arrays (1-D, 2-D), functions and pointers.	16	December, January, February			
4. Problems based on engineering applications.	14	February, March, April			
TOTAL	60				

GOVERNMENT POLYTECHNIC COLLEGE, KOTA (RAJ.)

SYLLABUS BREAK-UP (SESSION 2015-16)

SUBJECT CODE : **CS 203**

SUBJECT NAME : **Operating System Principles**

FACULTY NAME : **MUKUL KULSHRESTHA**

DESIGNATION : **LECTURER (Computer Sc. & Engg.)**

TOPIC	LECTURE / PRACTICAL CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC	REASON FOR NOT COVERING THE TOPIC IN DUE TIME	E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC
1. Introduction :	1	August			
1.1 What is an operating System					
1.2 Mainframe, Desktop & Multi processor	2	August			
1.3 Distributed System	2	August			
1.4 Real time Systems	1	September			
1.5 Operating System Services	1	September			
2. Process Management and CPU Scheduling :	1	September			
2.1 Process Concept					
2.2 Process Scheduling	2	September			
2.3 Concept of Threads & Multithreading	1	September			
2.4 Basic Complets – CPU/IU burst, CPU Scheduler, Preemptive scheduling dispatcher	2	September			
2.5 Scheduling Criteria	1	October			
2.6 Scheduling Algos : FCFS, SJF, Priority, Round Robin	3	October			
3. Deadlocks :	2	October			
3.1 What is Deadlock ?					
3.2 Necessary Conditions for deadlock					
3.3 Resource allocation graph	1	October			
3.4 Deadlock prevention	1	October			
3.5 Deadlock avoidance – Banker's Algo	2	October			
3.6 Deadlock Detection wait for graph and detection algorithm	2	November			
3.7 Deadlock recovery	1	November			
4. Memory Management:	1	November			
4.1 Structure of computer memory					
4.2 Logical verses physical address space	1	November			
4.3 Contiguous memory allocation and Fragmentation	2	November			
4.4 Concept of Paging: Basic method & h/w support	2	December			

4.5 Concept of segmentation: Basic Method & h/w support	2	December			
5. Virtual Memory:	1	December			
5.1 Concept of Virtual memory					
5.2 Concept of Demand Paging	1	December			
5.3 Page replacement Algorithms: FIFO, Optimal, LRU	2	January			
5.4 Allocation Algorithms: equal & proportional allocation	2	January			
5.5 Thrashing: Cause and Solution (working set model)	1	January			
6. File System:	2	January			
6.1 File concept					
6.2 File Attributes					
6.3 File Operations	1	January			
6.4 File Types	1	February			
6.5 File Access: Sequential and Direct					
6.6 Allocation Methods:	2	February			
6.6.1 Contiguous Allocation					
6.6.2 Linked Allocation					
6.6.3 Indexed Allocation					
7. Distributed Operating System (DOS):	1	February			
7.1 Introduction					
7.2 Hardware Concept: Multiprocessor and Multicomputer Systems	2	February			
7.3 Software Concept: Network File System (NFS), Network Operating System (NOS) verses DOS	2	March			
7.4 Design Issues: Transparency, Flexibility, Reliability, Performance, Scalability	2	March			
Revision work of Important Topics	3	March			
Privious Years Question Papers	3	April			
TOTAL	60				

GOVERNMENT POLYTECHNIC COLLEGE, KOTA (RAJ.)

SYLLABUS BREAK-UP (SESSION 2015-16)

SUBJECT CODE : **CS 306**

SUBJECT NAME : **Computer Network**

FACULTY NAME : **MUKUL KULSHRESTHA**

DESIGNATION : **LECTURER (Computer Sc. & Engg.)**

TOPIC	LECTURE / PRACTICAL CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC	REASON FOR NOT COVERING THE TOPIC IN DUE TIME	E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC
1. Data Link Layer and Local Area Networks : Introduction	1	January			
1.1 Data Link Layer Design Issues 1.1.1 Framing, 1.1.2 Error Detection and Correcting Code 1.1.3 Error Control	3	January			
1.2 LAN Protocols 1.2.1 Ethernet and IEEE 802.3 Standard CSMA/CD 1.2.2 IEEE 802.5 LAN Token Ring	3	February			
1.3 PPP : Point to Point Protocol	2	February			
1.4 FDDI : Fiber Distributed Data Interconnect	2	February			
2 Network Layer and Routing :	2	November			
2.1 Network Layer Design Issues					
2.2 Routing Algorithms 2.2.1 Shortest Path Routing 2.2.2 Flooding 2.2.3 Distance Vector Routing 2.2.4 Hierarchical Routing 2.2.5 Multicast Routing	6	November			
2.3 Internet Protocol 2.3.1 IPv4 Header 2.3.2 IPv4 Address 2.3.3 Subnetting 2.3.4 Internet Control Protocols	4	December			
2.4 IPv6 2.4.1 IPv6 Header 2.4.2 IPv6 Extension Headers 2.4.3 IPv6 Addresses	4	January			
2.5 Routers	2	January			
3. Transport Layer :	1	October			
3.1 Transport Layer Services					
3.2 Transport Protocol Mechanisms 3.2.1 Addressing 3.2.2 Multiplexing 3.2.3 Establishment a Connection 3.2.4 Releasing a Connection 3.2.5 Reliable Delivery 3.2.6 Flow Control and Buffering	6	October			

3.3 Connectionless Transport Protocol : UDP	1	October			
3.4 Connection - Oriented Transport Protocol : TCP 3.4.1 TCP Header format 3.4.2 TCP Connection Management 3.4.3 TCP Congestion Control 3.4.4 TCP Timer Management	3	November			
4. Application Layer : 4.1 Principles of Application Layer Protocols	2	August			
4.2 Domain Name System: DNS	2	August			
4.3 The File transfer Protocol : FTP	1	September			
4.4 Electronics Mail in the Internet : POP, HTTP, IMAP	2	September			
4.5 WWW and HTTP	2	September			
4.6 Network Management SNMP	1	September			
5. Wireless Networking : 5.1 Wireless LANs	1	March			
5.2 IEEE 802.11	1	March			
5.3 BlueTooth	1	March			
5.4 WiMAX IEEE 802.16	1	March			
5.5 Building a Network	1	March			
Revision work of Important Topics	3	March			
Privious Year Papers Solutions	2	April			
TOTAL	60				