# ACADEMIC CALENDAR FOR THE SESSION OF 2019-2020

## EVEN SEMESTER

## DBMS

| DURATION | TOPIC | DETAILS | LECTURES TO BE DELEVERD BY | NO. OF LECTURES |
|---|---|---|---|---|
| **February** | **Introduction to Database Management Systems** | Characteristics of database approach, data models, DBMS architecture and data independence. | PD | 3 |
| **Mid-February to March** | **Entity Relationship and Enhanced ER Modelling** | Entity types, relationships, SQL- Schema Definition, constraints, and object modelling. | PD | 3 |
| | **Relational Data Model** | Basic concepts, relational constraints, relational algebra, SQL queries | PD | 4 |
| | **Database design** | ER and EER to relational mapping, functional dependencies, normal forms up to third normal form. | PD | 8 |
| **March** | **CMSGCOR02P DBMS (Practical)** | **Note: MyAccess/MySQL may be used.**<br>The following concepts must be introduced to the students:<br>**DDL Commands**<br>● Create table, alter table, drop table<br><br>**DML Commands**<br>● Select , update, delete, insert statements<br>● Condition specification using Boolean and comparison operators (and, or, not,=,<>,>,<,>=,<=)<br>● Arithmetic operators and aggregate functions(Count, sum, avg, Min, Max)<br>● Multiple table queries (join on different and same tables)<br>● Nested select statements<br>● Set manipulation using (any, in, contains, all, not in, not contains. | PD | 10 |

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| **April** | | exists, not exists, union, intersect, minus, etc.)<br>• Categorization using group by……..having<br>• Arranging using order by<br>As per syllabus question | DG | 10 |
| **May – June** | **CMSGCOR02P DBMS (Practical)** | **Questions to be performed on above schema**<br>1. Create tables with relevant foreign key constraints<br>2. Populate the tables with data<br>3. Perform the following queries on the database :<br>1. Display all the details of all employees working in the company.<br>2. Display ssn, lname, fname, address of employees who work in department no 7.<br>3. Retrieve the birthdate and address of the employee whose name is 'Franklin T. Wong'<br>4. Retrieve the name and salary of every employee<br>5. Retrieve all distinct salary values. | PD,DG | 6 |
| **June –July** | **Internal Exam** | **Exam** | PD,DC | 2 |

## CMSGCOR04T: COMPUTER SYSTEM ARCHITECTURE

| DURATION | TOPIC | DETAILS | LECTURES TO BE DELEVERD BY | NO. OF LECTURES |
|---|---|---|---|---|
| **February** | **Introduction** | Logic gates, boolean algebra, combinational circuits, circuit simplification, flip-flops and sequential circuits, decoders, multiplexors, registers, counters and memory units. | **PD** | **12** |

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| **March** | **Data Representation and basic Computer Arithmetic** | Number systems, complements, fixed and floating point representation, character representation, addition, subtraction, magnitude comparison. | **DC** | **8** |
| **End-march to April** | **Basic Computer Organization and Design** | Computer registers, bus system, instruction set, timing and control, instruction cycle, memory reference, input-output and interrupt | **PD, DC** | **18** |
| **June** | **Central Processing Unit** | Register organization, arithmetic and logical micro-operations, stack organization, micro programmed control. | **DC** | **10** |
| **June** | Internal Exam | Exam | **PD,DC** | **2** |
| **June to mid-July** | **Programming the Basic Computer** | Instruction formats, addressing modes, instruction codes, machine language, assembly language, input output programming | **PD** | **8** |
| **Mid-July to end** | **Input-output Organization** | Peripheral devices, I/O interface, Modes of data transfer, direct memory access. | **DC** | **4** |

# CMSGDSE04:COMPUTER NETWORKS

| DURATION | TOPIC | DETAILS | LECTURES TO BE DELEVERD BY | NO. OF LECTURES |
|---|---|---|---|---|
| **February** | **Introduction** | Components of data communication, standards and organizations, Network Classification, Network Topologies ; network protocol; layered network architecture; overview of OSI reference model; overview of TCP/IP protocol suite | **DC** | **20** |
| **Mid-March** | **Physical Layer** | cabling, Network Interface Card, Transmission Media Devices- Repeater, Hub, Bridge, Switch, Router, Gateway | **DC** | **8** |
| **End-march to April** | **Data Link Layer** | Framing techniques; Error Control; Flow Control Protocols; Shared media protocols - CSMA/CD and CSMA/CA. | **PD** | **18** |
| **April end** | **Central Processing Unit** | Virtual Circuits and Datagram approach, IP addressing methods – Subnetting; Routing Algorithms (adaptive and non-adaptive | **DC** | **10** |
| **June** | Internal Exam | Exam | **PD,DC** | **2** |
| **June to mid-July** | Network Layer | Transport services, Transport Layer protocol of TCP and UDP | **PD** | **8** |
| **Mid-July to end** | **Application Layer** | Application layer protocols and services – Domain name system, HTTP, WWW, telnet, FTP, SMTP . | **DC** | **10** |

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| **July mid** | **Network Security** | :Common Terms, Firewalls, Virtual Private Networks | **PD** | **7** |