

# **DEPARTMENT OF ENGLISH**



**SOKAIKEDA COLLEGE OF ARTS AND SCIENCE FOR WOMEN**  
(Affiliated to the University of Madras)  
Chennai 600 099, Tamilnadu.

**VALUE ADDED COURSE**  
**SPOKEN ENGLISH**

**OBJECTIVES**

- To guide students to communicate efficiently.

**COURSE CODE- VACSE**

**SYLLABUS**

- **LSRW SKILLS**

|       |   |  |
|-------|---|--|
| Day 1 | Listening skills                            | Read a story and ask students to give review   |
| Day 2 | Simple Spoken English Conversation in Class | Simple topic to speak  |
| Day 3 | Testing the listening skills                | reading comprehension passages   |
| Day 4 | Reading skills                              | Reading cards, reading passages  |
| Day 5 | Writing skill                               | Simple topics are given in jumbled form and the students are asked to arrange it<br><br>Giving small writing tests |
| Day 6 | Testing speaking and writing skills         | Group Discussion<br><br>Writing dialogues  |
| Day 7 | FINAL ASSESSMENT                            |  |

**DURATION**

- 5 hours a day for 6 days (ONLINE)
- 2 hours for assessment

**ASSESSMENT**

- Final assessment is for 50 marks

  
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# **DEPARTMENT OF BIOCHEMISTRY**

# GYRUS INFOTECH MEDICAL CODING SOLUTIONS

## ANATOMY, PHYSIOLOGY, MEDICAL TERMINOLOGY & PATHOLOGY

### SYLLABUS

#### *Chapter - 1*

AN INTRODUCTION TO  
BODY STRUCTURES AND MEDICAL TERMINOLOGY

#### *Chapter - 2*

DERMATOLOGY

#### *Chapter - 3*

OPHTHALMOLOGY

#### *Chapter - 4*

OTORHINOLARYNGOLOGY (ENT)

#### *Chapter - 5*

PULMONOLOGY

#### *Chapter - 6*

CARDIOLOGY

#### *Chapter - 7*

GASTROENTEROLOGY

#### *Chapter - 8*

OBSTETRICS AND GYNECOLOGY

#### *Chapter - 9*

UROLOGY AND NEPHROLOGY

#### *Chapter - 10*

ORTHOPEDICS

#### *Chapter - 11*

NEUROLOGY AND PSYCHIATRY

#### *Chapter - 12*

ENDOCRINOLOGY AND METABOLIC HOMEOSTASIS



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# FIRST YEAR DMLT SYLLABUS

## PAPER -I

### COMMUNICATIVE ENGLISH & COMPUTING FUNDAMENTALS

1. Nouns & Pronouns
2. Verbs Adverbs & Adjectives
3. Active & Passive Voice
4. Direct Speech & Indirect Speech
5. Tenses
6. Drafting-Different Types Of Letter
7. Job Application
8. Advertisements
9. Basics of
  - MS WORD
  - MS EXCEL

## PAPER-II

### CLINICAL BIOCHEMISTRY & CLINICAL PATHOLOGY

1. Urine Examination
  - A. Physiology Of Urine Formation
  - B. Types Of Urine Sample Their Collection And Preservatives
  - C. Physical Examination
  - D. Chemical Examination
  - E. Microscopic Examination
2. Stool Examination
  - A. Physiology Of Stool Formation
  - B. Macroscopic And Microscopic
3. Transudates And Exudates
4. Cerebrospinal Fluid
  - A. Physiology Of CSF Formation
  - B. Collection Of CSF
  - C. Pressure Physical Chemical And Microscopic Examination Of CSF
5. Diabetes
  - A. Blood Glucose Homeostasis
  - B. Anticoagulants
  - C. Types Of Blood Glucose Sample
  - D. Types Of Hyperglycemia
  - E. Types Of Diabetes
  - F. Stages Of Diabetes
  - G. Steps To Differentiate Hyperglycemia And Diabetes
  - H. Complication Of Diabetes
6. GTT
  - A. Prerequisites Of GTT
  - B. Renal Threshold
  - C. Do's And Don't In GTT
  - D. 9 Types Of GTT Curves And Evaluation
  - E. Glycated Hemoglobin And Hba1c
7. Instrumentation Use Care And Maintenance Of Lab Instruments

Laboratory Ethics And Safety Measures In Clinical Lab

  
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## Practicals II (Clinical Biochemistry & Clinical Pathology)

1. Urine Physical Examination
2. Urine Chemical Examination
3. Microscopic Examination Of Urine Casts And Crystals
4. Stool Chemical Examination
5. Stool Microscopic Examination Of Ova And Cyst
6. Csf Glucose Examination
7. Csf Cytology
8. Blood Glucose Estimation By God -Pod Method (Colorimetry  
Semi Autoanalyser And Fully Automated Analyser)

### PAPER -

#### **MICROBIOLOGY & PARASITOLOGY**

1. STERILIZATION & DISINFECTION - Different methods
2. CLASSIFICATION OF MICRO ORGANISMS
3. STRUCTURE OF BACTERIA
4. BACTERIAL GROWTH FACTORS & PRODUCTS
5. MORPHOLOGY & STAINING REACTIONS MOTILITY
6. SPECIAL STAINING
7. PREPARATION OF CULTURE MEDIA
8. SPECIMEN COLLECTION & METHOD OF INOCULATION
9. STOOL EXAMINATION MACROSCOPIC, MICROSCOPIC & CONCENTRATION  
TECHNIQUE
10. MORPHOLOGY CLASSIFICATION & LIFE CYCLE OF INTESTINAL PARASITES



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12. MORPHOLOGY, CLASSIFICATION & LIFE CYCLE OF BLOOD PARASITES

13. IDENTIFICATION OF BLOOD PARASITES

**PRACTICALS III (MICROBIOLOGY & PARASITOLOGY)**

1. STERILISATION TECHNIQUE
2. GRAM STAINING
3. AFB STAINING
4. ALBERTS STAINING
5. PREPARATION OF CULTURE MEDIA
6. INOCULATION METHODS
7. STOOL EXAMINATION -SALINE PREPARATION
8. STOOL EXAMINATION IODINE PREPARATION
9. STOOL EXAMINATION - CONCENTRATION TECHNIQUE
10. THICK & THIN PREPARATION FOR MP
11. BLOOD WET SMEAR PREPARATION FOR MF
12. HANGING DROP PREPARATION

**PAPER-IV:**

**HEMATOLOGY & BLOOD BANKING**

1. COLLECTION OF BLOOD & ANTICOAGULANTS
2. HAEMOGLOBIN ESTIMATION DIFFERENT METHODS
3. RBC & WBC COUNT
4. PLATELET COUNT & ABSOLUTE EOSINOPHIL COUNT
5. RETICULOCYTE COUNT
6. ESR
7. PCV MCV MCH & MCHC
8. PREPARATION OF BLOOD SMEAR STAINING TECHNIQUES & DIFFERENTIAL WBC COUNT
9. IDENTIFICATION OF NORMAL AND ABNORMAL CELLS



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10. AUTOMATION IN HAEMATOLOGY LABORATORY
11. BLEEDING TIME CLOTTING TIME & PROTHROMBIN TIME
12. LE CELL IDENTIFICATION METHOD
13. ROULEAUX FORMATION & AUTO AGGLUTINATION
14. BUFFY COAT PREPARATION
15. ABO GROUPING & RH TYPING
16. COOMBS TEST
17. BLOOD TRANSFUSION, DONOR SCREENING & CROSS MATCHING
18. BLOOD & ITS PRODUCTS
19. TRANSFUSION COMPLICATION

#### **PRACTICALS IV (HAEMATOLOGY & BLOOD BANKING)**

1. VENOUS BLOOD COLLECTION
2. VENOUS BLOOD COLLECTION BY VACUTAINER METHOD
3. CAPILLARY BLOOD COLLECTION
4. HAEMOGLOBIN ESTIMATION BY CYANMETHAEMOGLOBIN METHOD
5. RBC COUNT
6. WBC COUNT
7. PLATELETS COUNT
8. ABSOLUTE EOSINOPHIL COUNT
9. RETICULOCYTE COUNT
10. ESR TEST
11. PCV TEST
12. MCV MCH & MCHC
13. PREPARATION OF BLOOD SMEAR
14. FIELD STAIN
15. DC
16. BLEEDING TIME
17. CLOTTING TIME



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18. PROTHROMBIN TIME
19. BLOOD GROUP BY CELL GROUPING TECHNIQUE
20. BLOOD GROUP SERUM GROUPING TECHNIQUE
21. DIRECT COOMBS TEST
22. INDIRECT COOMBS TEST
23. CROSS MATCHING MAJOR & MINOR



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**SECOND YEAR**  
**DMLT SYLLABUS**

**PAPER-I**

**CLINICAL BIOCHEMISTRY**

**1. LIVER FUNCTION TEST**

- PHYSIOLOGY OF LIVER
- FUNCTION OF LIVER
- BILIRUBIN METABOLISM
- JAUNDICE AND ITS TYPES
- DIFFERENTIAL DIAGNOSIS OF JAUNDICE
- LIVER ENZYMES
- IMPORTANCE OF PROTEIN IN EVALUATING LIVER FUNCTION
- TEN CASE STUDIES OF ABNORMAL LFT

**2. RENAL FUNCTION TEST**

- PHYSIOLOGY OF KIDNEYS
- FUNCTION OF KIDNEY
- NPN
- 6 STAGES OF RENAL FAILURE
- TEN CASE STUDY OF RFT EVALUATION.

**3. LIPID PROFILE**

- PHYSIOLOGY OF BLOOD VESSELS
- PHYSIOLOGY OF FAT METABOLISM
- ROLE OF CHYLOMICRON AND LIPOPROTEINS



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-TYPES OF LIPOPROTEIN

-CHOLESTROL EVALUATION AND INTERPRETATION

-TEN CASE STUDY OF ABNORMAL LIPID PROFILE

#### **4. ELECTROLYTES**

-BIOCHEMISTRY OF ELECTROLYTES

-FUNCTIONS AND ABNORMALITIES

#### **5. DIAGNOSTICALLY IMPORTANT ENZYMES & PROTEINS**

-HEART

-LIVER

-LUNGS

-KIDNEY

-BONE

-SPLEEN

#### **6. HORMONES**

-THYROID FUNCTION TEST

-SUB FERTILITY HORMONES OF MALE AND FEMALE

#### **7. MICRONUTRIENTS AND MACRONUTRIENTS**



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## **PRACTICALS-I (CLINICAL BIOCHEMISTRY)**

1. TOTAL CHOLESTEROL
2. TRIGLYCERIDES
3. HDL
4. LDL
5. VLDL
6. TC/HDL
7. LDL/HDL
8. UREA
9. CREATININE (SEMI)
10. CALCIUM
11. PHOSPHORUS
12. URIC ACID
13. TOTAL PROTEIN
14. ALBUMIN
15. GLOBULIN
16. A/G RATIO
17. TOTAL BILIRUBIN
18. DIRECT BILIRUBIN
19. INDIRECT BILIRUBIN
20. SGOT (SEMI)
21. SGPT (SEMI)
22. ALKALINE PHOSPHATASE (SEMI)
23. A-15 BIOSYSTEM FULLY AUTOMATED BIOCHEMISTRY ANALYSER (D)



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## PAPER-II

### MICROBIOLOGY & SEROLOGY

1. ISOLATION AND IDENTIFICATION OF BACTERIA
  - BIOLOGICAL PROPERTIES OF BACTERIA
  - BIOCHEMICAL TESTS
  - CULTURE CHARACTERISTICS OF BACTERIA
  - ANTIBIOTIC SENSITIVITY TESTS
2. GRAM POSITIVE & NEGATIVE COCCI
3. GRAM POSITIVE & NEGATIVE BACILLI
4. VIBRIOS
5. SPIROCHAETES
6. LEPTOSPIRA
7. MYCOLOGY
8. VIROLOGY
9. IMMUNO GLOBULINS & THEIR DIAGNOSTIC IMPORTANCE
  - VDRL,RPR,WIDAL TEST,CRP,ASO,RA,HBSAG,HIV



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## PRACTICALS-II (MICROBIOLOGY & SEROLOGY)

1. COAGULASE TEST
2. CATALASE TEST
3. BILE SOLUBILITY TEST
4. INDOLE TEST
5. UREASE TEST
6. CITRATE TEST
7. MANNITOL TEST
8. TSI TEST
9. ANTIBIOTIC SENSITIVITY TEST
10. HANGING DROP PREPARATION
11. HIV TEST
12. HBSAG TEST
13. VDRL TEST
14. ASO
15. CRP
16. RA
17. WIDAL



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### **PAPER-III**

## **HAEMATOLOGY & HISTOPATHOLOGY**

1. ERYTHROPOIESIS
2. LEUCOPOIES
3. THROMBOPOIESIS
4. PHYSIOLOGICAL VARIATIONS IN LEUCOCYTES
5. BONE MARROW EXAMINATION
6. MORPHOLOGICAL TYPES & IDENTIFICATION
7. ANEMIA –DIFFERENT TYPES & IDENTIFICATION
8. POLYCYTHEMIA
9. LEUKEMIA- DIFFERENT TYPES & IDENTIFICATION
10. FIXATION
11. DEHYDRATION
12. CLEARING
13. INFILTRATION
14. IMPREGNATION
15. MOULDING AND TRIMMING
16. SECTION CUTTING
17. DEPARAFFINIZING
18. STAINING
19. MOUNTING
20. DECALCIFICATION



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## PRACTICALS-III (HAEMATOLOGY & HISTOPATHO

1. BLOOD SMEAR PREPARATION
2. STAINING
3. PS EXAMINATION
4. RBC MOROPHOLOGY VARIATION
5. WBC MOROPHOLOGY VARIATION
6. PLATELETS MOROPHOLOGY VARIATION
7. FIXATION
8. DEHYDRATION
9. CLEARING
10. INFILTRATION
11. IMPREGNATION
12. MOULDING
13. TRIMMING
14. SECTION CUTTING
15. DEPARAFFINIZING
16. STAINING- H&E STAIN
17. MOUNTING
18. DECALCIFICATION



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# **GREEN TREE TESTING**

## **LABS**

### **CHROMATOGRAPHY TRAINING**

#### **Topics Covered**

##### **1. Basics of chromatography**

- **Thin layer chromatography**
  - Principle
- **Gas chromatography**
  - Principle
  - Operation
  - Analysis
- **Liquid chromatography**
  - Principle
  - Operation
  - Analysis
- **Dissolution Test Apparatus**
  - Principle
  - Operation
  - Analysis
- **UV**
  - Principle
  - Operation
  - Analysis
- **AAS (Atomic Absorption Spectroscopy)**
  - Principle
  - Operation



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# **GREEN TREE TESTING**

## **LABS**

➤ Analysis

- IR (Infrared Spectroscopy)

➤ Principle

➤ Operation

➤ Analysis

### **2. Wet Analysis**

- Solubility

- Loss On Ignition

- Loss On Drying

- Karl Fischer Titration (Moisture Content)

- Residue On Ignition

- pH

- Weight Per ml

- Titration

  - Manual Titration

  - Potentiometric Titration

- Total Hardness Of water

### **3. Other Test**

- Friability Apparatus

- Disintegration Test Apparatus

Tablet Hardness Tester

Melting & Boiling Point

Conductivity Meter



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# **GREEN TREE TESTING**

## **LABS**

- Leak Test Apparatus
  - Bulk density Apparatus
4. Pharmaceutical Calculation
  5. Resume Preparation
  6. Mock Interview



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# **DEPARTMENT OF COMMERCE**



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# 10. CERTIFICATE COURSE IN ACCOUNTING AND TALLY

## SEMESTER - I PAPER I - BASICS OF ACCOUNTING AND TALLY

### UNIT I :

Meaning and process of Accounting - Distinction between book-keeping and Accounting - Meaning of an accounting cycle - Primary objectives of Accounting - Users of Accounting information and their needs

### UNIT II :

Basic terms in accounting - Basic assumptions of accounting - Basic principles of accounting - Modifying principles - Meaning of accounting equation.

### UNIT III :

Introduction to Tally - Features of Tally - Advantages and Disadvantages

### UNIT IV :

Journalizing - Meaning of an account ; Classification of accounts - Meaning and rules of debit and credit - Meaning and format of a journal - Meaning of Journalizing

### UNIT V :

Formation of Company using Tally package - Different kinds of Vouchers - Uses of different vouchers

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## PAPER II - CREATION OF LEDGER AND JOURNAL

### UNIT I :

Ledger posting - Compound entry - Meaning, recording and posting of an opening entry - Balancing ✓

### UNIT II :

Creation of Ledger accounts - Voucher Entry

### UNIT III :

Subsidiary Books - Need, Meaning and advantages of special journals (Purchase book - Sales book - Purchase return book - Sales return book - Journal proper)

### UNIT IV :

Creation of Manufacturing Journal - Single stock group - Units of Measure - Groups - Pre-defined groups in Tally

### UNIT V :

Cash book - Meaning - Types of cash book - Single column Petty cash book

## SEMESTER - II

## PAPER III - INVOKING OF BRS AND TRIAL BALANCE

### UNIT I :

Bank Reconciliation Statement - Banking transactions - Dishonor of a cheque - Need for BRS - Preparation of BRS - Cash book favorable balance - Cash book overdraft balance - Pass book favorable balance - Pass book overdraft balance

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UNIT II :

Depreciation - Meaning of Depreciation - Meaning of depreciation accounting - Causes of depreciation - Need for providing depreciation - Factors determining the amount of depreciation - Straight Line Method - Written Down Value Method - Distinction between SLM and WDV method

UNIT III :

Average Due Date - Days of grace and date of maturity - Account Current - Époque method of calculating interest

Accounting procedure for goods sold on approval - few transactions - Moderly large transactions - Substantially large transactions

UNIT IV :

Trial Balance and Rectification of Errors - Need and importance of trial balance - Errors disclosed by a Trial Balance - Errors, which do not affect the agreement of the Trial Balance

UNIT V :

Trial Balance - Types of Errors - Steps to locate errors - Correcting the errors - Suspense account

**PAPER IV - PREPARATION OF FINANCIAL STATEMENTS**

UNIT I :

Meaning of Financial Statement - Usefulness of Financial Statements - Trading Account - Manufacturing Account

UNIT II :

Profit and Loss Account - Direct items - Indirect items - Classification of Capital and Revenue - Distinction between

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prepaid expenses and outstanding expenses - Distinction  
between accrued income and unaccrued income

### UNIT III :

Treatment of items of adjustments appearing in the Trial  
Balance

### UNIT IV :

Balance Sheet - Distinction between tangible and intangible  
assets - Distinction between a Trial Balance and Balance Sheet

### UNIT V :

Construction of Trading, Profit & Loss Account and Balance  
Sheet - Practical Problems

### REFERENCE BOOKS :

1. Financial Accounting - R.C.Gupta & V.K.Gupta - Sultan  
Chand & Sons
2. Financial Accounting - T.S.Reddy & A.Murthy
3. Advanced Accounting - R.L.Gupta & Radhaswamy
4. Principles of Accounting - T.S.Shukla & Grewal
5. Tally made easy - Exercise Problems



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**DEPARTMENT OF COMPUTER SCIENCE –  
SHIFT II**



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## **Value Added Course**

### **Multimedia**

#### **Objective of the Course:**

Multimedia will help to improve computer penetration in various spheres of life. In the present scenario, Multimedia and web design technology play an important role in the field of education, agriculture, product launch, science and technology, corporate development and enhanced business opportunities. With the increasing variety and range of hardware and software used for Multimedia and Web-Site Design, the demand for the manpower in these fields has escalated. This training programme has been envisaged with an objective to develop specialized manpower required for these activities.

#### **Learning Outcome:**

- Understand and apply various techniques of drawing for animation.
- Process knowledge about art in animation field.

#### **Duration:**

- 3 hours a day for 10 days
- 2 hours for assessment

#### **Assessment:**

- Final assessment is for 50 marks



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## Syllabus

- 1. Introduction to Multimedia** **04 Hrs.**  
Concept of Multimedia, Multimedia applications, Advantage of Digital Multimedia, Multimedia system Architecture, Objects of Multimedia.
- 2. Image Editing** **04 Hrs.**  
Introduction to Scanner (concept of DPI), File formats (BMP, JPG, TIF, GIF etc), acquiring, importing, exporting Images, Image editing using Adobe Photoshop.
- 3. Computer Graphics** **04 Hrs.**  
Prepress Image preparation, color correction, retouching, enhancement, special effects, file formats, conversion and web graphic formatting, image composition, close cropping, superimposition and high-end layering effects.
- 4. Animation** **05 Hrs.**  
Animation basics, 2D editor and animation, 2D to 3D conversion, 3D editing and rendering, material editor and rendering, light, camera concepts, key framer, menu and toolbar, file formats, conversion from AVI to MPEG, encoding and decoding of MPEG pictures, Knowledge of 3D animation, modeling, character animation, painting, lighting and textures.
- 5. Getting started with Flash & Photoshop** **04 Hrs.**  
Flash: An Overview, Benefits of Flash, Differences between flash and Director, Flash user interface, Creating graphics, Modifying graphics, Types of text, Adding text, Modifying text shape
- 6. Creating animations in Flash & Photoshop** **04 Hrs.**  
Introduction to layers: creating layers, specifying the properties of a layer, Animation in Flash: Frame-by-Frame Animation, Tweened Animation, Previewing an Animation, Masking: Masking graphics, Masking text
- 7. Sound Editing** **03 Hrs.**  
Hardware requirements (sound blaster card, speakers, micro phone etc), types of CD and CD Drives, file formats (wav, midi, tracks etc), recording of audio (mono/ stereo), audio mixing and editing, audio compression and decompression, sound forge illustrations.
- 8. Multimedia authoring** **02 Hrs.**  
Multimedia authoring tools, Multimedia authoring guide lines.



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### **Value Added Course**

### **Internet of Things (IOT)**

#### **Objective of the Course:**

This Course focuses on hands-on IoT concepts such as sensing, actuation and communication. It covers the development of Internet of Things (IoT) prototypes—including devices for sensing, actuation, processing, and communication—to help you develop skills and experiences. The Internet of Things (IOT) is the next wave, world is going to witness. Today we live in an era of connected devices the future is of connected things.

#### **Learning Outcome:**

After the completion of the course, the students will be able design some IOT based prototypes

#### **Duration:**

- 3 hours a day for 10 days
- 2 hours for assessment

#### **Assessment:**

- Final assessment is for 50 marks

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## Syllabus

### **1. Introduction to IoT**

**8 Hours**

- Understanding IoT fundamentals
- IOT Architecture and protocols
- Various Platforms for IoT
- Real time Examples of IoT
- Overview of IoT components and IoT Communication Technologies
- Challenges in IoT

### **2. Basic Networking - Basics of Wireless Networking**

**7 Hours**

- Introduction
- Various Wi-Fi library
- Web server- introduction, installation, configuration
- Posting sensor(s) data to web server

### **3. IoT Protocols**

**7 Hours**

- M2M vs. IOT
- Communication Protocols

### **4. Cloud Platforms for IOT**

**8 Hours**

- Virtualization concepts and Cloud Architecture
- Cloud computing, benefits
- Cloud services – SaaS, PaaS, IaaS
- Cloud providers & offerings
- Study of IOT Cloud platforms
- Thing Speak API and MQTT
- Interfacing ESP8266 with Web services



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