

**BHARATHIYAR INSTITUTE OF ENGINEERING FOR WOMEN**

**DEVIYAKURICHI, SALEM DT-636112**

**DEPARTMENT OF CSE**

**REGULATION 2021**

**COURSE OUTCOMES & CO-PO MAPPINGS**

**SEMESTER-I**

**SUBJECT CODE & NAME: HS3151 & PROFESSIONAL ENGLISH – I**


**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C101.1	Listen, Comprehend and Correspond with others at various contexts
C101.2	Speak legibly and fluently under various life-time situations by applying proper communication modules
C101.3	Read and understand a variety of writings and technical text by analyzing the meaning and language
C101.4	Apply clear and legible writing skills in error free style in coherent manner
C101.5	Remember and use various communicative skills in precise and efficient way on technological contexts
C101.6	Form situational conversations and technical writing styles for interpersonal and effective communication

**CO-PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C101.1	-	-	-	-	-	-	-	-	3	3	-	2	-	-
C101.2	-	-	-	-	-	-	-	-	3	3	-	2	-	-
C101.3	-	-	-	-	-	-	-	-	2	3	-	2	-	-
C101.4	-	-	-	-	-	-	-	-	2	3	-	2	-	-
C101.5	-	-	-	-	-	-	-	-	3	3	-	2	-	-
C101.6	-	-	-	-	-	-	-	-	3	3	-	2	-	-
<b>C101</b>	-	-	-	-	-	-	-	-	3	3	-	2	-	-

  
Dr. R. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICHI - 636 112,  
THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME: MA3151 & MATRICES AND CALCULUS – I**

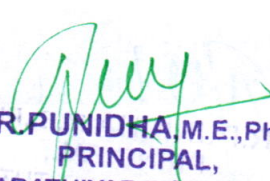
**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C102.1	Determine the Eigen values, Eigen vectors to diagonalize a matrix and reduce quadratic form to canonical form.
C102.2	Apply the concept of limits, continuity, rules of differentiation, techniques of differentiation to differentiate standard functions.
C102.3	Apply the concepts of Concavity, Convexity to determine the critical points, point of Inflection, Maxima and Minima of Single variable functions.
C102.4	Compute the derivatives of functions of two variables and apply them to calculate the maxima and minima.
C102.5	Determine integrals using techniques of integration, such as substitution, partial fractions and integration by parts.
C102.6	Apply various techniques to solve higher order differential equations with constant and variable Coefficients

**CO – PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C102.1	3	2	1	-	-	-	-	1	1	-	-	-	2	-
C102.2	3	2	1	-	-	-	-	1	1	-	-	-	2	-
C102.3	3	2	1	-	-	-	-	1	1	-	-	-	2	-
C102.4	3	2	1	-	-	-	-	1	1	-	-	-	2	-
C102.5	3	2	1	-	-	-	-	1	1	-	-	-	2	-
C102.6	3	2	1	-	-	-	-	1	1	-	-	-	2	-
<b>C102</b>	3	2	1	-	-	-	-	1	1	-	-	-	2	-

  
Dr. R. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVYAKURICH! - 636 112,  
THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME: PH3151 & ENGINEERING PHYSICS**

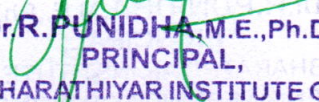
**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C103.1	Demonstrate the properties of elasticity and measure the different moduli of elasticity
C103.2	Discuss the characteristics of laser and optical fiber
C103.3	Explain the concepts of ultrasonics in engineering
C103.4	Explain black body radiation, properties of matter waves and Schrodinger equation
C103.5	Classify the Bravais lattices and different types of crystal structures
C103.6	Summarize the information on growth of crystals and deformations

**CO-PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C103.1	3	2	1	-	-	-	-	-	-	-	-	-	1	-
C103.2	2	1	-	-	-	-	-	1	1	1	-	-	1	-
C103.3	2	1	-	-	-	-	-	1	1	1	-	-	1	-
C103.4	2	1	-	-	-	-	-	1	1	1	-	-	1	-
C103.5	3	2	1	-	-	-	-	-	-	-	-	-	1	-
C103.6	2	1	-	-	-	-	-	1	1	1	-	-	1	-
<b>C103</b>	2	1	1	-	-	-	-	1	1	1	-	-	1	-

  
Dr. R. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICH! - 636 112,  
THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME: CY3151 & ENGINEERING CHEMISTRY**


**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C104.1	Determine the hardness of water and explain the water treatment methods.
C104.2	Define nanochemistry and its types and process of synthesizing nano particles
C104.3	Describe the phase diagram of one component and two component system and various methods of heat treatment of steel.
C104.4	Classify the various types of fuels by their characteristics and explain the flue gas analysis by Orsat method.
C104.5	Illustrate the working of Lead acid battery, lithium ion battery and fuel cell.
C104.6	Apply Nernst equation to determine the EMF of the cell and explain various corrosion control methods.

**CO-PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C104.1	2	1	-	-	-	1	1	-	-	-	-	-	-	-
C104.2	2	1	1	-	-	1	1	-	-	-	-	-	1	-
C104.3	2	1	-	-	-	-	-	-	-	-	-	-	-	-
C104.4	2	1	-	-	-	1	1	-	-	-	-	-	1	-
C104.5	2	1	-	-	-	1	1	-	-	-	-	-	1	-
C104.6	2	1	1	-	-	1	1	-	-	-	-	-	1	-
<b>C104</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>

  
Dr. R. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIVAKURICH! - 636 112,  
THALAIYASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME: GE3151 & PROBLEM SOLVING AND PYTHON PROGRAMMING**


**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C105.1	Explain Components of a Computer System, types of programming languages, types of software with examples and purpose.
C105.2	Perform problem analysis, use algorithms and prepare flow charts, pseudo code for solving simple problems.
C105.3	Use Conditional, iteration constructs of python programming and apply to solve simple problems
C105.4	Use Functions, recursive function, String functions in python programming and apply to perform linear and binary search
C105.5	Explain the various operations for manipulating Tuples, Dictionaries and Use List to perform simple and sorting operations
C105.6	Explain file handling operations, exception handling, modules and packages and illustrate programs for word count, file copy, merge operations and exception handling.

**CO – PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C105.1	2	1	-	-	-	-	-	-	-	-	-	-	2	1
C105.2	2	1	-	-	-	-	-	-	-	-	-	-	2	1
C105.3	3	2	1	-	-	-	-	-	-	-	-	-	2	1
C105.4	3	2	1	-	-	-	-	-	-	-	-	-	2	1
C105.5	3	2	1	-	-	-	-	-	-	-	-	-	2	1
C105.6	3	2	1	-	-	-	-	-	-	-	-	-	2	1
<b>C105</b>	3	2	1	-	-	-	-	-	-	-	-	-	2	1

  
Dr. R. PUNIBHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVYAKURICH! - 636 112,  
THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME: GE3171 & PROBLEM SOLVING AND PYTHON PROGRAMMING  
LABORATORY**


**COURSE OUTCOMES:**

After the Course the Students should be able to:

C106.1	Develop simple Python programs using conditional and iterative constructs
C106.2	Develop simple Python programs using built-in functions and user-defined functions
C106.3	Develop a Python program using recursion to implement linear and binary search
C106.4	Develop a Python program using list to implement selection and insertion sort
C106.5	Develop Python programs to implement matrix operations
C106.6	Develop a Python program to implement file handling

**CO – PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C106.1	3	2	1	-	1	-	-	-	-	-	-	-	2	1
C106.2	3	2	1	-	1	-	-	-	-	-	-	-	2	1
C106.3	3	2	1	-	1	-	-	-	-	-	-	-	2	1
C106.4	3	2	1	-	1	-	-	-	-	-	-	-	2	1
C106.5	3	2	1	-	1	-	-	-	-	-	-	-	2	1
C106.6	3	2	1	-	1	-	-	-	-	-	-	-	2	1
<b>C106</b>	3	2	1	-	1	-	-	-	-	-	-	-	2	1

  
**Dr.R.PUNIDHA, M.E., Ph.D.,**  
**PRINCIPAL,**  
**BHARATHIYAR INSTITUTE OF**  
**ENGINEERING FOR WOMEN,**  
**DEVİYAKURICH! - 636 112,**  
**THALAIVASAL (TK), SALEM (DT).**

**SUBJECT CODE & NAME : BS3171 & PHYSICS AND CHEMISTRY LABORATORY**

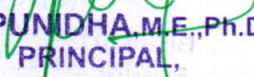
**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C107.1	Calculate rigidity modulus and Young's modulus of a given material.
C107.2	Examine the size of a given particle, parameters of optical fiber and compute the thickness of a given thin wire.
C107.3	Discover the velocity of ultrasound, compressibility of a given liquid and band gap of a given semiconductor diode.
C107.4	Estimate the Chemical quality parameter of a water sample.
C107.5	Estimate the strength of acid by conductometric and pH metric titration.
C107.6	Estimate the amount of iron content in a given solution using potentiometer

**CO – PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C107.1	3	2	1	-	-	-	-	1	1	1	-	-	1	-
C107.2	3	2	1	-	-	-	-	1	1	1	-	-	1	-
C107.3	3	2	1	-	-	-	-	1	1	1	-	-	1	-
C107.4	3	2	1	-	-	-	-	1	1	1	-	-	1	-
C107.5	3	2	1	-	-	-	-	1	1	1	-	-	1	-
C107.6	3	2	1	-	-	-	-	1	1	1	-	-	1	-
<b>C107</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>

  
Dr.R.PUNDHA M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICH! - 636 112,  
THALAIVASAL (TK), SALEM (DT).

## SEMESTER-II

**SUBJECT CODE & NAME : HS3251 & PROFESSIONAL ENGLISH – II**


### COURSE OUTCOMES:

After the Course the Students should be able to:

C108.1	Listen, Understand and create technical correspondence at advanced level.
C108.2	Respond or answer to the contextual questions, interview questions, form instructions, draft reports
C108.3	Speak and analyze social issues, come out with effective ideas for discussion, understand the passages for meaning and vocabulary
C108.4	Assess error free technical writings, create legible and coherent technical papers, derive ideas of the given texts in a precise form
C108.5	Remember the updated elements of communication skills, nuances of non- verbal communication, business communication
C108.6	Create technical instructions, process instructions, self-appraisals, Resumes, reports on various situations

### **CO – PO MAPPING**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C108.1	-	-	-	-	-	-	-	-	3	3	-	2	-	-
C108.2	-	-	-	-	-	-	-	-	3	3	-	2	-	-
C108.3	-	-	-	-	-	-	-	-	3	3	-	2	-	-
C108.4	-	-	-	-	-	-	-	-	2	3	-	2	-	-
C108.5	-	-	-	-	-	-	-	-	3	3	-	2	-	-
C108.6	-	-	-	-	-	-	-	-	3	3	-	2	-	-
<b>C108</b>	-	-	-	-	-	-	-	-	3	3	-	2	-	-

  
**Dr.R.PUNIDHA,M.E.,Ph.D.,**  
**PRINCIPAL,**  
**BHARATHIYAR INSTITUTE OF**  
**ENGINEERING FOR WOMEN,**  
**MEMORIAL CAMPUS, VIYAKURICHI- 636 112,**  
**PO: AIVASAL (TK), SALEM (DT).**



**SUBJECT CODE & NAME : MA3251 & STATISTICS AND NUMERICAL METHODS**

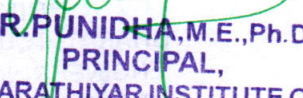
**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C109.1	Determine the Laplace transform of standard functions using properties
C109.2	Apply Laplace transform and inverse transform to solve the initial value problems
C109.3	Solve the multiple integrals and apply the concept to find areas, volumes
C109.4	Determine the line, surface and volume integrals using Green's, Gauss and Stokes theorems
C109.5	Determine Analytic functions, Bilinear Transformations and apply the concept of conformal mapping to find the images of given curves.
C109.6	Determine the Contour Integrals using Cauchy's Integral and Residue theorems.

**CO –PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C109.1	3	2	1	-	-	-	-	1	1	-	-	-	-	-
C109.2	3	2	1	-	-	-	-	1	1	-	-	-	-	-
C109.3	3	2	1	-	-	-	-	1	1	-	-	-	-	-
C109.4	3	2	1	-	-	-	-	1	1	-	-	-	1	-
C109.5	3	2	1	-	-	-	-	1	1	-	-	-	1	-
C109.6	3	2	1	-	-	-	-	1	1	-	-	-	1	-
<b>C109</b>	3	2	1	-	-	-	-	1	1	-	-	-	1	-

  
**Dr. R. PUNIDHA, M.E., Ph.D.,**  
**PRINCIPAL,**  
**BHARATHIYAR INSTITUTE OF**  
**ENGINEERING FOR WOMEN,**  
**DEVIYAKURICH! - 636 112,**  
**THALAIVASAL(TK), SALEM (DT).**

**SUBJECT CODE & NAME: PH3256 & PHYSICS FOR INFORMATION SCIENCE**


**COURSE OUTCOMES:**

After the Course the Students should be able to:

<b>C110.1</b>	Gain knowledge on classical and quantum electron theories and energy band structures.
<b>C110.2</b>	Acquire knowledge on basis of semiconductor physics and its applications in various devices.
<b>C110.3</b>	Get knowledge on magnetic and dielectric properties of materials.
<b>C110.4</b>	Have the necessary understanding on the functioning of optical materials for opto electronics.
<b>C110.5</b>	Illustrate the basics of quantum structures and their applications in spintronics.
<b>C110.6</b>	Introduction to Carbon nanotubes and explain its properties and applications

**CO – PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C110.1	3	1	1	-	-	-	-	2	1	-	-	-	1	-
C110.2	3	1	1	-	-	-	-	2	1	-	-	-	1	-
C110.3	3	1	1	-	-	-	-	2	1	-	-	-	1	-
C110.4	3	1	1	-	-	-	-	2	1	-	-	-	1	-
C110.5	3	1	1	-	-	-	-	2	1	-	-	-	1	-
C110.6	3	1	1	-	-	-	-	2	1	-	-	-	1	-
<b>C110</b>	3	1	1	-	-	-	-	2	1	-	-	-	1	-

  
Dr. R. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVYAKURICH! - 636 112,  
THALAIVASAL (TK), SALEM (DT).

(TO) M...

**SUBJECT CODE & NAME : BE3251 & ELECTRICAL AND INSTRUMENTATION ENGINEERING**

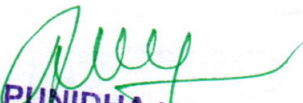
**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

<b>C111.1</b>	Apply the fundamental laws and network theorems to solve simple and complex linear circuits
<b>C111.2</b>	Explain the basic principle of electrical machines and their performance
<b>C111.3</b>	Describe the different energy sources, protective devices and their field applications
<b>C111.4</b>	Discuss the fundamentals of electronic circuit using diode, transistor and Op amps.
<b>C111.5</b>	Illustrate about renewable sources and common domestic loads.
<b>C111.6</b>	Explain the principles and operation of measuring instruments and transducer

**CO – PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C111.1	3	2	1	1	-	-	-	2	-	-	-	2	2	-
C111.2	3	2	1	1	-	-	-	2	-	-	-	2	2	-
C111.3	3	2	1	1	-	-	-	2	-	-	-	2	2	-
C111.4	3	2	1	1	-	-	-	2	-	-	-	2	2	-
C111.5	3	2	1	1	-	-	-	2	-	-	-	2	2	-
C111.6	3	2	1	1	-	-	-	2	-	-	-	2	2	-
<b>C111</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>2</b>	<b>-</b>

  
Dr.R.PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICHI - 636 112,  
S. THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME: GE3251& ENGINEERING GRAPHICS**

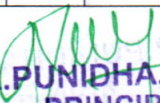
**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C112.1	Familiarize the fundamentals and standards of engineering graphics
C112.2	Perform free hand sketching of basic construction and machine equipments.
C112.3	Project orthographic projection of lines and plane surfaces
C112.4	Draw the projection of solids and development of solid.
C112.5	Visualize and project isometric perspective section of solids and surfaces.
C112.6	Draw the free hand sketching of simple objects.

**CO – PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C112.1	2	1	-	-	1	-	-	-	1	-	-	-	1	1
C112.2	2	1	-	-	1	-	-	-	1	-	-	-	1	1
C112.3	2	1	-	-	1	-	-	-	1	-	-	-	1	1
C112.4	2	1	-	-	1	-	-	-	1	-	-	-	1	1
C112.5	2	1	-	-	1	-	-	-	1	-	-	-	1	1
C112.6	2	1	-	-	1	-	-	-	1	-	-	-	1	1
<b>C112</b>	<b>2</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>1</b>

  
Dr.R.PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICH! - 636 112,  
THALAIVASAL(TK), SALEM (DT).

**SUBJECT CODE & NAME : CS3251 &PROGRAMMING IN C**

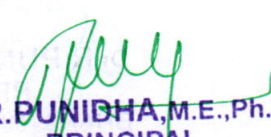
**COURSE OUTCOMES:**

After the Course the Students should be able to:

C113.1	Describe various basic programming constructs in C
C113.2	Solve simple mathematical problems using arrays and strings.
C113.3	Illustrate the usage of functions and pointers to develop C programs.
C113.4	Ability to work with arrays of complex objects.
C113.5	Develop simple applications in C using structures and unions.
C113.6	Make use of sequential and random access operations for file handling processes.

**CO – PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C113.1	3	2	1	-	1	-	-	-	-	-	-	-	2	1
C113.2	3	2	1	-	1	-	-	-	-	-	-	-	2	1
C113.3	3	2	1	-	1	-	-	-	-	-	-	-	2	1
C113.4	3	2	1	-	1	-	-	-	-	-	-	-	2	1
C113.5	3	2	1	-	1	-	-	-	-	-	-	-	2	1
C113.6	3	2	1	-	1	-	-	-	-	-	-	-	2	1
<b>C113</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>1</b>

  
Dr. R. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICH! - 636 112,  
THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME : GE3271 & ENGINEERING PRACTICES LABORATORY**

**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C114.1	Apply the knowledge of pipeline connections to household fittings and industrial buildings
C114.2	Prepare the different joints in roofs, doors windows and furniture
C114.3	Perform step turning operation in a lathe
C114.4	Perform the various welding processes and know about it s applications
C114.5	Produce a funnel using sheet metal
C114.6	Elaborate on the components, Gates, Soldering practices

**CO – PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C114.1	3	2	2	-	-	-	-	1	1	2	-	-	1	-
C114.2	3	2	2	-	-	-	-	1	1	2	-	-	1	-
C114.3	3	2	2	-	-	-	-	1	1	2	-	-	1	-
C114.4	3	2	2	-	-	-	-	1	1	2	-	-	1	-
C114.5	3	2	2	-	-	-	-	1	1	2	-	-	1	-
C114.6	3	2	2	-	-	-	-	1	1	2	-	-	1	-
<b>C114</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>

  
Dr. R. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,

BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
10, MYRATHUR ROAD, 636 012

THALAIYADAL (TK), SALEM (DT).

**SUBJECT CODE & NAME: CS3271 & PROGRAMMING IN C LABORATORY**

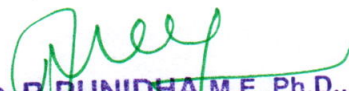
**COURSE OUTCOMES:**

After the Course the Students should be able to:

C115.1	Develop simple programs in C using basic constructs
C115.2	Develop programs in C using arrays and strings to solve simple mathematical problems.
C115.3	Apply functions and pointers to develop C programs
C115.4	Develop applications in C using strings, pointers and functions
C115.5	Develop application in C using structures
C115.6	Develop application in C using file processing

**CO –PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C115.1	3	2	2	-	-	-	-	1	1	2	-	-	1	1
C115.2	3	2	2	-	-	-	-	1	1	2	-	-	1	1
C115.3	3	2	2	-	-	-	-	1	1	2	-	-	1	1
C115.4	3	2	2	-	-	-	-	1	1	2	-	-	1	1
C115.5	3	2	2	-	-	-	-	1	1	2	-	-	1	1
C115.6	3	2	2	-	-	-	-	1	1	2	-	-	1	1
<b>C115</b>	3	2	2	-	-	-	-	1	1	2	-	-	1	1

  
Dr. P. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICH! - 636 112,  
THALAIVASAL (TK), SALEM (DT).

## SEMESTER-III

**SUBJECT CODE & NAME: MA3354 & DISCRETE MATHEMATICS**

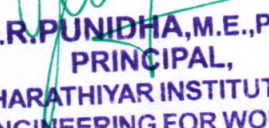
### **COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C201.1	Determine the knowledge of the concepts needed to test the logic of a program.
C201.2	Discuss the understanding in identifying structures on many levels.
C201.3	Apply functions and pointers to develop C programs
C201.4	Apply of the counting principles.
C201.5	Develop concepts and properties of algebraic structures such as groups,
C201.6	Develop concepts and properties of rings and fields

### **CO – PO MAPPING**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C201.1	-	-	-	-	-	-	-	-	3	3	-	2	-	-
C201.2	-	-	-	-	-	-	-	-	3	3	-	2	-	-
C201.3	-	-	-	-	-	-	-	-	3	3	-	2	-	-
C201.4	-	-	-	-	-	-	-	-	-	3	-	2	-	-
C201.5	-	-	-	-	-	-	-	-	2	3	-	2	-	-
C201.6	-	-	-	-	-	-	-	-	3	3	-	2	-	-
<b>C201</b>	-	-	-	-	-	-	-	-	3	3	-	2	-	-

  
**Dr.R.PUNIDHA,M.E.,Ph.D.,**  
**PRINCIPAL,**  
**BHARATHIYAR INSTITUTE OF**  
**ENGINEERING FOR WOMEN,**  
**DEVIYAKURICHI - 636 112,**  
**THALAIVASAL(TK), SALEM (DT).**



## SEMESTER - III

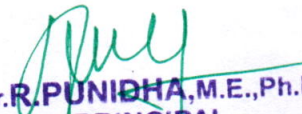
**SUBJECT CODE & NAME : CS3351 & DIGITAL PRINCIPLES AND COMPUTER ORGANIZATION**  
**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C202.1	Design various combinational digital circuits using logic gates .
C202.2	Design sequential circuits and analyze the design procedures
C202.3	State the fundamentals of computer systems and analyze the execution of an instruction
C202.4	Analyze different types of control design and identify hazards
C202.5	Identify the characteristics of various memory systems and I/O communication
C202.6	Analyze the advanced computer hardware applications

### CO –PO-PSO MAPPING:

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C202.1	3	2	1	1	2	-	-	-	1	1	2	1	2	2
C202.2	2	2	1	2	2	-	-	-	1	1	1	2	2	2
C202.3	2	1	-	1	1	-	-	-	2	1	1	2	2	3
C202.4	2	2	1	2	2	1	1	-	1	2	1	3	2	2
C202.5	3	2	2	1	2	-	-	-	1	1	2	2	3	3
C202.6	2	2	1	1	2	1	1	-	1	1	1	2	2	2
<b>C202</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>

  
**Dr. R. PUNIDHA, M.E., Ph.D.,**  
**PRINCIPAL,**  
**BHARATHIYAR INSTITUTE OF**  
**ENGINEERING FOR WOMEN,**  
**DEVIYAKURICH! - 636 112,**  
**THALAIVASAL (TK), SALEM (DT).**

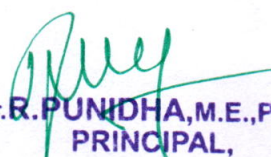
**SUBJECT CODE & NAME: CS3352 FOUNDATIONS OF DATA SCIENCE****COURSE OUTCOMES:**

After the Course the Students should be able to:

C203.1	Define the data science process
C203.2	Understand different types of data description for data science process
C203.3	Gain knowledge on relationships between data
C203.4	Use the Python Libraries for Data Wrangling
C203.5	Apply visualization Libraries in Python to interpret and explore data
C203.6	Analyze the advanced computer hardware applications

**CO-PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C203.1	2	2	1	2	2	-	-	-	1	1	1	2	2	2
C203.2	2	1	-	1	1	-	-	-	2	1	1	2	2	2
C203.3	2	2	1	2	2	1	1	-	1	2	1	3	2	2
C203.4	3	2	2	1	2	-	-	-	1	1	2	2	3	3
C203.5	2	2	1	2	2	-	-	-	1	1	1	2	2	2
C203.6	2	2	1	2	2	1	1	-	1	1	1	2	2	2
<b>C203</b>	2	2	1	2	2	1	1	-	1	1	1	2	2	2

  
Dr. R. PUNDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVYAKURICHI - 636 112,  
THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME :CS3301 DATA STRUCTURES**

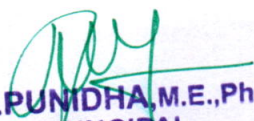
**COURSE OUTCOMES:**

After the Course the Students should be able to:

C204.1	Define linear and non-linear data structures
C204.2	Implement linear and non-linear data structure operations
C204.3	Use appropriate linear/non-linear data structure operations for solving a given problem
C204.4	Apply appropriate graph algorithms for graph applications
C204.5	Analyze the various searching and sorting algorithms
C204.6	Analyze the advanced computer hardware applications

**CO-PO-PSO MAPPING**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C204.1	2	3	1	2	2	1	1	-	1	2	1	3	2	1
C204.2	1	2	1	2	2	-	-	-	1	1	1	2	2	2
C204.3	2	3	1	2	3	-	-	-	1	1	1	2	2	1
C204.4	2	1	-	1	1	-	-	-	2	1	1	2	2	3
C204.5	1	2	1	2	2	1	1	-	1	2	1	3	2	2
C204.6	2	2	1	2	2	1	1	-	1	1	1	2	2	2
<b>C204</b>	2	2	1	2	2	1	1	-	1	1	1	2	2	2

  
Dr.R.PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICH! - 636 112,  
THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME :CS3391 OBJECT ORIENTED PROGRAMMING**

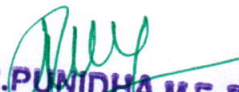
**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C205.1	Apply the concepts of classes and objects to solve simple problems
C205.2	Develop programs using inheritance, packages and interfaces
C205.3	Make use of exception handling mechanisms and multithreaded model to solve real world problems
C205.4	Build Java applications with I/O packages, string classes, Collections and generics concepts
C205.5	Integrate the concepts of event handling and JavaFX components and controls for developing GUI based applications
C205.6	Analyze the advanced java web applications

**CO-PO-PSO MAPPING:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C205.1	1	1	3	1	3	-	-	-	3	2	2	2	3	1
C205.2	2	1	3	2	1	-	-	-	2	1	1	3	3	3
C205.3	3	3	1	2	2	-	-	-	3	2	1	2	3	1
C205.4	3	1	2	2	2	-	-	-	1	2	1	3	3	1
C205.5	1	1	2	3	2	-	-	-	3	2	1	2	3	3
C205.6	2	1	2	2	2	-	-	-	2	2	1	2	3	2
<b>C205</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>2</b>

  
**Dr. R. PUNIDHA, M.E., Ph.D.,**  
**PRINCIPAL,**  
**BHARATHIYAR INSTITUTE OF**  
**ENGINEERING FOR WOMEN,**  
**DEVIYAKURICHI - 636 112,**  
**THALAIVASAL (TK), SALEM (DT).**

**SUBJECT CODE & NAME : CS3311 DATA STRUCTURES LABORATORY**

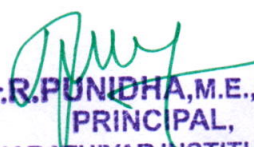
**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C206.1	Implement Linear data structure algorithms
C206.2	Implement applications using Stacks and Linked lists
C206.3	Implement Binary Search tree and AVL tree operations
C206.4	Implement graph algorithms
C206.5	Analyze the various searching and sorting algorithms
C206.6	Analyze the various data structure applications

**CO-PO-PSO MAPPING**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C206.1	1	2	2	1	-	-	-	-	2	1	2	2	2	2
C206.2	3	3	1	1	-	-	-	-	1	1	1	3	1	2
C206.3	2	1	3	1	-	-	-	-	1	1	2	3	3	3
C206.4	3	1	3	3	-	-	-	-	1	2	3	3	2	1
C206.5	3	2	1	1	2	-	-	-	3	3	3	1	3	1
C206.6	2	2	2	1	2	-	-	-	2	2	2	2	2	2
<b>C206</b>	2	2	2	1	2	-	-	-	2	2	2	2	2	2

  
**Dr. R. PUNDHA, M.E., Ph.D.,**  
**PRINCIPAL,**  
**BHARATHIYAR INSTITUTE OF**  
**ENGINEERING FOR WOMEN,**  
**DEVYAKURICHI - 636 112,**  
**THALAIVASAL (TK), SALEM (DT).**

**SUBJECT CODE & NAME :CS3381 OBJECT ORIENTED PROGRAMMING LABORATORY**

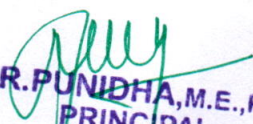
**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C207.1	Implement Linear data structure algorithms
C207.2	Implement applications using Stacks and Linked lists
C207.3	Implement Binary Search tree and AVL tree operations
C207.4	Implement graph algorithms
C207.5	Analyze the various searching and sorting algorithms
C207.6	Analyze the various data structure applications

**CO-PO-PSO MAPPING**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C207.1	2	1	2	1	-	-	-	-	1	2	2	2	1	2
C207.2	2	1	3	1	-	-	-	-	2	3	3	2	1	3
C207.3	2	2	1	2	1	-	-	-	1	2	1	3	2	3
C207.4	2	2	1	3	-	-	-	-	3	1	1	1	2	1
C207.5	1	3	3	1	3	-	-	-	1	1	1	1	2	1
C207.6	2	2	2	2	2	-	-	-	2	2	2	2	2	2
<b>C207</b>	2	2	2	2	2	-	-	-	2	2	2	2	2	2

  
Dr. R. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICHI - 636 112,  
THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME : CS3361 DATA SCIENCE LABORATORY**


**COURSE OUTCOMES:**

**After the Course the Students should be able to:**

C208.1	Make use of the python libraries for data science
C208.2	Make use of the basic Statistical and Probability measures for data science
C208.3	Perform descriptive analytics on the benchmark data sets
C208.4	Perform correlation and regression analytics on standard data sets
C208.5	Present and interpret data using visualization packages in Python
C208.6	Analyze the Apply and explore various plotting functions on UCI data sets

**CO-PO-PSO MAPPING**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C208.1	3	2	1	1	-	-	-	-	1	3	3	3	1	3
C208.2	3	2	2	3	1	-	-	-	3	1	3	2	1	3
C208.3	3	2	1	3	1	-	-	-	2	1	1	1	3	2
C208.4	2	3	1	3	-	-	-	-	2	3	2	3	3	3
C208.5	1	2	3	1	1	-	-	-	2	1	3	1	1	3
C208.6	2	2	2	2	1	-	-	-	2	2	2	2	2	3
<b>C208</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>

  
Dr. R. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVYAKURICHI - 636 112,  
THALAIVASAL (TK), SALEM (DT).

## SEMESTER -IV

**SUBJECT CODE & NAME : CS3452 THEORY OF COMPUTATION**

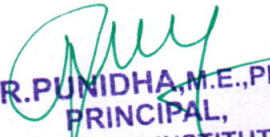
### COURSE OUTCOMES:

After the Course the Students should be able to:

C209.1	Construct automata theory using Finite Automata
C209.2	Write regular expressions for any pattern
C209.3	Design context free grammar and Pushdown Automata
C209.4	Design Turing machine for computational functions
C209.5	Differentiate between decidable and undecidable problems
C209.6	Analyze the advanced theoretical problems

### CO's-PO's&PSO's MAPPING

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C209.1	1	3	2	3	-	-	-	-	1	1	2	3	1	3
C209.2	2	2	3	2	1	-	-	-	3	3	2	3	3	1
C209.3	2	2	3	2	1	-	-	-	1	3	1	2	1	2
C209.4	2	2	2	1	-	-	-	-	1	3	3	2	1	3
C209.5	2	2	2	1	1	-	-	-	1	1	3	2	3	1
C209.6	2	2	2	1	1	-	-	-	1	1	3	2	3	1
C209	2	2	2	2	1	-	-	-	1	2	2	2	2	2

  
Dr. R. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICHI - 636 112,  
THALAIVASAL (TK), SALEM (DT).



**SUBJECT CODE & NAME :CS3491 ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING**

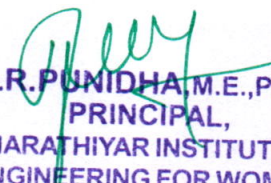
**COURSE OUTCOMES:**

After the Course the Students should be able to:

C210.1	Use appropriate search algorithms for problem solving
C210.2	Apply reasoning under uncertainty
C210.3	Build supervised learning models
C210.4	Build ensembling and unsupervised models
C210.5	Build deep learning neural network models
C210.6	Apply the machine learning models

**CO's-PO's&PSO's MAPPING**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C210.1	3	2	3	3	-	-	-	-	1	3	3	3	1	2
C210.2	1	1	1	3	1	-	-	-	1	2	1	3	2	3
C210.3	2	1	2	1	1	-	-	-	2	1	1	3	1	1
C210.4	3	1	3	1	-	-	-	-	2	1	2	1	2	2
C210.5	3	1	1	2	2	-	-	-	3	1	2	3	2	1
C210.6	2	1	2	2	1	-	-	-	2	2	2	3	2	2
C210	2	1	2	2	1	-	-	-	2	2	2	3	2	2

  
Dr.R.PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICH! - 636 112,  
THALAIVASAL(TK), SALEM (DT).

## SUBJECT CODE & NAME : CS3492 DATABASE MANAGEMENT SYSTEMS

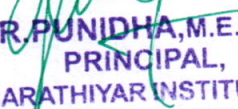
### COURSE OUTCOMES:

After the Course the Students should be able to:

C211.1	Construct SQL Queries using relational algebra
C211.2	Design database using ER model and normalize the database
C211.3	Construct queries to handle transaction processing and maintain consistency of the database
C211.4	Compare and contrast various indexing strategies and apply the knowledge to tune the performance of the database
C211.5	Appraise how advanced databases differ from Relational Databases and find a suitable database for the given requirement.
C211.6	Apply the database web applications.

### CO's-PO's&PSO'sMAPPING

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C211.1	2	2	3	2	1	-	-	-	2	1	1	1	2	1
C211.2	3	1	1	1	1	-	-	-	2	3	3	3	3	1
C211.3	3	2	3	2	1	-	-	-	2	1	1	2	2	3
C211.4	1	2	3	2	-	-	-	-	3	2	3	3	1	2
C211.5	1	1	3	3	2	-	-	-	1	3	3	1	2	2
C211.6	1	1	3	3	2	-	-	-	1	3	3	1	2	2
C211	2	2	3	2	1	-	-	-	2	2	2	2	2	2

  
Dr. R. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVİYAKURICHI - 636 112,  
THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME : CS3401 ALGORITHMS**

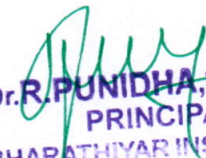
**COURSE OUTCOMES:**

After the Course the Students should be able to:

C212.1	Analyze the efficiency of algorithms using various frameworks
C212.2	Apply graph algorithms to solve problems and analyze their efficiency
C212.3	Make use of algorithm design techniques like divide and conquer, dynamic programming and greedy techniques to solve problems
C212.4	Use the state space tree method for solving problems
C212.5	Solve problems using approximation algorithms and randomized algorithms.
C212.6	Apply the randomized algorithms in theoretical problem

**CO's-PO's&PSO's MAPPING**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C212.1	2	1	3	2	-	-	-	-	2	1	2	3	2	1
C212.2	2	1	1	1	1	-	-	-	1	3	3	3	2	3
C212.3	1	3	3	3	1	-	-	-	1	2	1	2	2	1
C212.4	1	2	2	3	-	-	-	-	2	3	3	1	3	1
C212.5	1	2	3	2	3	-	-	-	3	1	3	3	1	3
C212.6	1	2	3	2	3	-	-	-	3	1	3	3	1	3
C212	1	2	3	2	2	-	-	-	2	2	3	3	2	2

  
Dr. R. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVİYAKURICHI - 636 112  
THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME : CS3451 INTRODUCTION TO OPERATING SYSTEMS**

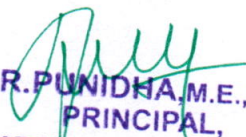
**COURSE OUTCOMES:**

After the Course the Students should be able to:

C213.1	Analyze various scheduling algorithms and process synchronization
C213.2	Explain deadlock prevention and avoidance algorithms.
C213.3	Compare and contrast various memory management schemes
C213.4	Explain the functionality of file systems, I/O systems, and Virtualization
C213.5	Compare iOS and Android Operating Systems.
C213.6	Apply the randomized algorithms in theoretical problem

**CO's-PO's & PSO's MAPPING**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C213.1	3	1	2	2	-	-	-	-	3	2	3	1	1	2
C213.2	2	2	3	1	1	-	-	-	2	1	1	2	2	1
C213.3	1	3	2	2	1	-	-	-	2	2	1	1	1	2
C213.4	1	3	3	3	-	-	-	-	1	2	1	2	1	3
C213.5	3	1	2	1	1	-	-	-	3	2	3	2	2	2
C213.6	3	1	2	1	1	-	-	-	3	2	3	2	2	2
C213	2	2	2	2	1	-	-	-	2	2	2	2	2	2

  
Dr. R. PUNDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICH! - 636 112,  
THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME : CS3461 OPERATING SYSTEMS LABORATORY**

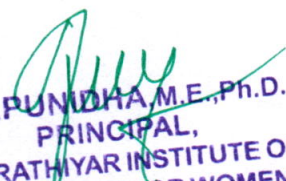
**COURSE OUTCOMES:**

After the Course the Students should be able to:

C214.1	Define and implement UNIX Commands
C214.2	Compare the performance of various CPU Scheduling Algorithms .
C214.3	Compare and contrast various Memory Allocation Methods
C214.4	Define File Organization and File Allocation Strategies
C214.5	Compare iOS and Android Operating Systems.
C214.6	Implement various Disk Scheduling Algorithms

**CO's-PO's & PSO's MAPPING**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C214.1	3	1	3	1	1	-	-	-	1	3	3	3	2	1
C214.2	3	1	1	2	2	-	-	-	3	2	1	1	3	1
C214.3	3	3	2	1	2	-	-	-	3	3	1	2	2	2
C214.4	1	2	2	3	2	-	-	-	3	1	3	1	1	2
C214.5	2	2	1	1	3	-	-	-	1	2	2	3	1	3
C214.6	2	2	1	1	3	-	-	-	1	2	2	3	1	3
C214	2	2	2	2	2	-	-		2	2	2	2	2	2

  
Dr.R.PUNIDHA M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICHI - 636 112,  
THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME : CS3461 OPERATING SYSTEMS LABORATORY**

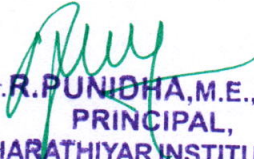
**COURSE OUTCOMES:**

After the Course the Students should be able to:

C215.1	Define and implement UNIX Commands
C215.2	Compare the performance of various CPU Scheduling Algorithms .
C215.3	Compare and contrast various Memory Allocation Methods
C215.4	Define File Organization and File Allocation Strategies
C215.5	Compare iOS and Android Operating Systems.
C215.6	Implement various Disk Scheduling Algorithms

**CO's-PO's & PSO's MAPPING**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C215.1	3	1	3	1	1	-	-	-	1	3	3	3	2	1
C215.2	3	1	1	2	2	-	-	-	3	2	1	1	3	1
C215.3	3	3	2	1	2	-	-	-	3	3	1	2	2	2
C215.4	1	2	2	3	2	-	-	-	3	1	3	1	1	2
C215.5	2	2	1	1	3	-	-	-	1	2	2	3	1	3
C215.6	2	2	1	1	3	-	-	-	1	2	2	3	1	3
C215	2	2	2	2	2	-	-	-	2	2	2	2	2	2

  
Dr. R. PUNDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVYAKURICHI - 636 112,  
THALAIVASAL (TK), SALEM (DT).

**SUBJECT CODE & NAME :CS3481 DATABASE MANAGEMENT SYSTEMS LABORATORY**

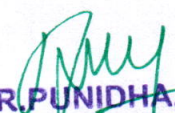
**COURSE OUTCOMES:**

After the Course the Students should be able to:

C216.1	Create databases with different types of key constraints
C216.2	Construct simple and complex SQL queries using DML and DCL commands .
C216.3	Use advanced features such as stored procedures and triggers and incorporate in GUI based application development.
C216.4	Create an XML database and validate with meta-data (XML schema).
C216.5	Create and manipulate data using NOSQL database
C216.6	Implement database web applications

**CO's-PO's &PSO's MAPPING**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C216.1	3	3	3	3	-	-	-	-	3	1	3	2	2	3
C216.2	2	2	3	2	2	-	-	-	1	2	3	3	2	1
C216.3	3	3	2	1	1	-	-	-	1	1	1	3	2	3
C216.4	1	3	3	3	1	-	-	-	1	1	3	2	3	1
C216.5	3	2	1	1	1	-	-	-	2	2	3	1	3	1
C216.6	3	3	3	3	-	-	-	-	3	1	3	2	2	3
C216	3	3	3	2	1	-	-	-	2	1	3	2	2	2

  
Dr. R. PUNIDHA, M.E., Ph.D.,  
PRINCIPAL,  
BHARATHIYAR INSTITUTE OF  
ENGINEERING FOR WOMEN,  
DEVIYAKURICHI - 636 112,  
THALAIVASAL (TK), SALEM (DT).