ANNA ADARSH COLLEGE FOR WOWEN

DEPARMENT OF COMPUTER SCIENCE – SHIFT I

PROGRAMME: B.Sc. COMPUTER SCIENCE

LIST OF STAFF MEMBERS

S.No	Name	Designation	Degree
1	Dr.Hannah Vijaykumar	Associate Professor	M.C.A., M.Phil., Ph.D
2	Ms. A.Lakshmi	Associate Professor	M.C.A., M.Phil., SET
3	Ms. A.P.Tharani	Associate Professor	M.Sc., M.Phil
4	Dr.A.Parameswari	Associate Professor	M.Sc., M.Phil, SET., Ph.D
5	Ms.M.Revathy Meenal	Associate Professor	M.C.A., M.Phil
6	Dr.K.Maheswari	Assistant Professor	M.C.A., M.Phil., Ph.D
7	Dr.P.Pakutharivu	Assistant Professor	M.Sc., M.Phil., Ph.D
8	Ms.K.Unnamalai	Assistant Professor	M.Sc., M. Phil
9	Ms.K.Sumathi	Assistant Professor	M.Sc., M.Phil., SET
10	Ms.S.Radha	Assistant Professor	M.C.A., M.Phil
11	Ms.S.Ranjana	Assistant Professor	M.Sc., M.Phil., SET
12	Ms.S.Mahalakshmi	Assistant Professor	M.Sc., M.Phil., SET
13	Ms.M.Anita Rajkumar	Assistant Professor	M.C.A., M.Phil
14	Dr.D.Sasirkeha	Assistant Professor	M.Sc., M.Phil., Ph.D

Program Outcomes:

After completing B.Sc. Computer Science Program students will be able to:

PO1: To develop problem solving abilities using a computer.

PO2: To prepare necessary knowledge base for research and development in Computer Science.

PO3: To build the necessary skill set and analytical abilities for developing computer-based solutions for real life problems.

PO4: communicate scientific information in a clear and concise manner both orally and in writing.

PO5: To train students in professional skills related to Software Industry.

ANNA ADARSH COLLEGE FOR WOWEN

DEPARTMENT OF COMPUTER SCIENCE – SHIFT II

PROGRAMME: B.Sc. COMPUTER SCIENCE

LIST OF STAFF MEMBERS

S.No	Name	Designation	Degree
1	Ms. G. Umamaheswari	Assistant Professor	B.Ed, GNIIT, MCA, M.Phil
2	Ms. M. Anita Priscilla Mary	Assistant Professor	M.C.A, M.Phil, SET
3	Ms. R. Allirani	Assistant Professor	M.C.A, M.Phil, B.Ed, SET
4	Ms. A. Vincy	Assistant Professor	M.Sc, M.Phil, SET.
5	Ms. G. Prathima	Assistant Professor	M.Sc, M.Phil
6	Ms. V. Janaki	Assistant Professor	M.C.A., M.Phil., SET
7	Ms. M. Manju Priya	Assistant Professor	M.Sc, M.Phil, SET
8	Dr. T. Nusrat Jabeen	Assistant Professor	M.Sc, M.Phil, Ph.D
9	Ms. R.S. Dhanalakshmi	Assistant Professor	M.C.A, M.Phil, SET, NET
10	Ms. R. Jaya Glory	Assistant Professor	M.Sc, M.Phil, SET, NET

Program Outcomes:

After completing B.Sc. Computer Science Program students will be able to:

PO1: To develop problem solving abilities using a computer.

PO2: To prepare necessary knowledge base for research and development in Computer Science.

PO3: To build the necessary skill set and analytical abilities for developing computer-based solutions for real life problems.

PO4: communicate scientific information in a clear and concise manner both orally and in writing.

PO5: To train students in professional skills related to Software Industry.

Course Structure

B.Sc. COMPUTER SCIENCE
SYLLABUS
2021-2022

SEMESTER I

PART	Name of Course	Credits	Exam Hours	MAXIMUM MARKS		
SEMESTER I				EXT	CIA	TOTAL
I	Tamil/other languages-I	3	3	75	25	100
II	English-I	3	3	75	25	100
III	Core I-Problem Solving using Python	4	3	75	25	100
III	Core I-Problem Solving using Python Lab	3	3	60	40	100
III	Allied I-Mathematics I	5	3	75	25	100
IV	Basic Tamil/Advanced Tamil/Non-Major Elective I	2	3	75	25	100
IV	Soft Skill I	3	3	50	50	100
	Total Credits	23				

SEMESTER II

PART	Name of Course	Credits	Exam Hours	MAXIMUM MARKS		
SEMESTER II				EXT	CIA	TOTAL
I	Tamil/other languages-II	3	3	75	25	100
II	English-II	3	3	75	25	100
III	Core II-Computer Organization	4	3	75	25	100
III	Core II-Computer Organization Lab	3	3	60	40	100
III	Allied II-Mathematics II	5	3	75	25	100
IV	Basic Tamil/Advanced Tamil/Non Major elective II	2	3	75	25	100
IV	Soft Skill II	3	3	50	50	100
	Total Credits	23				

SEMESTER III

PART	Name of Course	Credits	Exam Hours	MAXIMUM MARKS		
SEMESTER III				EXT	CIA	TOTAL
I	Tamil/other languages-III	3	3	75	25	100
II	English-III	3	3	75	25	100
III	Core III-Java And Data Structures	4	3	75	25	100
III	Core III-Data Structures Using Java Lab	3	3	60	40	100
III	Allied III-Physics I/Statistics I	5	3	75	25	100
IV	Soft Skill III	3	3	50	50	100
IV	Environmental studies	Examination will be held in Semester IV				
	Total Credits	21				

SEMESTER IV

PART	Name of Course	Credits	Exam Hours	MAXIMUM MARKS		
SEMESTER IV				EXT	CIA	TOTAL
I	Tamil/other languages-IV	3	3	75	25	100
II	English-IV	3	3	75	25	100
III	Core IV-Web technology	4	3	75	25	100
III	Practical IV -Web Technology Lab	3	3	60	40	100
III	Allied IV-Physics II/Statistics II	5	3	75	25	100
IV	Soft Skill IV	3	3	50	50	100
IV	Environmental studies	2	3	75	25	100
	Total Credits	23				

SEMESTER V

PART	Name of Course	Credits	Exam Hours	MAXIMUM MARKS		
SEMESTER V				EXT	CIA	TOTAL
III	Operating System	4	3	75	25	100
III	Database Management Systems	4	3	75	25	100
III	Computer Architecture and Organization	4	3	75	25	100
III	Practical V-RDBMS Lab	4	3	60	40	100
III	Elective – I Visual Programming	5	3	75	25	100
IV	Value Education	2				
	Total Credits	23				

SEMESTER VI

PART	Name of Course	Credits	Exam Hours	MAXIMUM MARKS		
SEMESTER V				EXT	CIA	TOTAL
III	Data Communication and Networking	4	3	75	25	100
III	Web Technology	4	3	75	25	100
III	Practical VI-Web Applications Lab	4	3	75	25	100
III	Elective – II Data Mining	5	3	60	40	100
III	Elective – II Software Engineering	5	3	75	25	100
V	Extension Activities	1				
	Total Credits	23				

SEMESTER I	Subject title	subject code	Credit
	TAMIL -I	LA11A	3

பாடத்திட்டத்தின் நோக்கம்:

காலந்தோறும் தமிழ் அடைந்துள்ள வளர்ச்சியையும், இன்றைய நவீன காலத்தில் உருவான தமிழ் இலக்கியங்களையும் ஒற்றுமை வேற்றுமைப்படுத்தி ஆராய்கின்ற நோக்கில் பொதுத்தமிழ்ப் பாடப்பகுதி கட்டமைக்கப்பட்டுள்ளது.

பாரதியார், பாரதிதாசன், கவிமணி உள்ளிட்டோரின் மரபுக்கவிதைகளும், அப்துல் ரகுமான், சிற்பி, மு.மேத்தா, வைரமுத்து உள்ளிட்டோரின் புதுக் கவிதைகளும் இரா.பி.சுதுப்பிள்ளை அவர்களின் உரைநடை, முத்துசாமி அவர்களின் நாடகம் போன்றவை இடம்பெற்றுள்ளன.

தமிழ் மக்களின் வாய்மொழி இலக்கியங்களில் சிலபாடல்கள் பாடமாக வைக்கப்பட்டுள்ளன. இந்த இலக்கியங்கள் சார்ந்த வரலாற்றுப் பின்புலமும் பாடமாக அமைந்துள்ளன.

மாணவர்களுக்குப் படிப்பின் ஆர்வத்தைத் தூண்டும் வகையில் கவிதைகள், சிறுகதை, உரைநடை, நாடகம் போன்ற எளிமையான பகுதிகள் அமைக்கப்பட்டுள்ளன.

இலக்கிய வாசிப்பின் ஆர்வத்தை ஊக்குவித்தலும் தற்கால தமிழ் இலக்கியத்தின் ஆளுமைகளை மாணவர்கள் புரிந்துகொள்ள வைத்தலும் பாடத்திட்டத்தின் நோக்கமாகும்.

தமிழ் இலக்கிய வரலாற்றில் தற்கால படைப்பாளர்களையும் படைப்புகளையும் அறிமுகப்படுத்தித் தமிழ் இலக்கியப் பாரம்பரியத்தைப் புரிய வைத்தலும் பிழையின்றி

எழுதுவதற்குரிய இலக்கண விதிமுறைகளைத் தெரிந்து கொள்ளுதலும் பாடத்திட்டத்தின் நோக்கமாகும்.

தமிழ் மொழியின் கடினமான சொற்களுக்குரிய பொருளைத் தெரிந்துகொள்ளும் வகையில் அகராதியைப் பயன்படுத்துவதற்குரிய அடிப்படையைக் கற்றுத்தருதலே நோக்கமாகும்.

பாடத்திட்டம்

பாடப்பகுப்பு

I.இலக்கியம்

II.அதைச் சார்ந்த தமிழிலக்கிய வரலாறு

III.மொழிப் பயிற்சி

அலகு - 1

மரபுக்கவிதை

1. பாரதியார் - பாரத சமுதாயம்.
2. பாரதிதாசன் - ஒற்றுமைப்பாட்டு
3. கவிமணி தேசிக விநாயகம் பிள்ளை - உடல் நலம் பேணல்
4. நாமக்கல் கவிஞர் வெ. இராமலிங்கம்பிள்ளை - தமிழன் இதயம்
5. கவிஞர் கண்ணதாசன் - குடும்பம் ஒரு கதம்பம்
6. பட்டுக்கோட்டை அ. கல்யாணசுந்தரம் - வருங்காலம் உண்டு
7. தமிழ் ஒளி - வழிப்பயணம்

புதுக்கவிதை

1. கவிஞர் ந. பிச்சமூர்த்தி - காதல்
2. கவிஞர் அப்துல் ரகுமான் - பித்தன்
3. கவிஞர் மு.மேத்தா - காதலர் பாதை, ஒரு கடிதம் அனாதையாகிவிட்டது, நிழல்கள்
4. கவிஞர் இன்குலாப் - ஒவ்வொரு புல்லையும் பெயர் சொல்லி அழைப்பேன்
5. கவிஞர் தமிழன்பன் - சொல்லில் உயர்வு தமிழ்ச்சொல்லே
6. கவிஞர் வைரமுத்து – விதைச்சோளம்
7. கவிஞர் அ.சங்கரி - இன்று நான் பெரிய பெண்

அலகு - 2

நாட்டுப்புற இலக்கியம்

1. ஏற்றப்பாட்டு
2. தெம்மாங்கு
3. அம்பா பாடல்கள்
4. விளையாட்டுப் பாடல்கள்

5. நடவுப் பாடல்கள்

அலகு - 3

சிறுகதைகள்

1. கு.ப.ரா- கனகாம்பரம்
2. கு.அழகிரிசாமி - குமாரபுரம் ஸ்டேஷன்
3. தமிழ்ச்செல்வன் - வெயிலோடு போய்
4. தோப்பில் முகமது மீரான் - வட்டக்கண்ணாடி
5. அம்பை - பிளாஸ்டிக் டப்பாவில் பராசக்தி முதலியோர்

உரைநடை

1. இரா.பி.சேதுப்பிள்ளை - வண்மையும் வறுமையும்

அலகு - 4

நாடகம்

நா.முத்துசாமி - நாற்காலிக்காரர்

அலகு -5

தமிழிலக்கிய வரலாறு

1. மரபுக் கவிதை - இருபதாம் நூற்றாண்டு கவிஞர்கள்
2. புதுக்கவிதை - தோற்றம் - வளர்ச்சி -வரலாறு
3. நாட்டுப்புறப் பாடல்கள், கதைகள், கதைப்பாடல்கள், பழமொழிகள், விடுகதைகள் - வரலாறு
4. சிறுகதை, உரைநடை வரலாறு
5. நாடகம் - வரலாறு

அலகு - 6

மொழிப் பயிற்சி

1. வாக்கிய வகை(தொடர் வாக்கியம், தனி வாக்கியம், கூட்டு வாக்கியம்)
2. இரு வழக்குகள் (பேச்சு, எழுத்து)
3. எழுவாய், பயனிலை, செயப்படுபொருள்
4. ஒருமை, பன்மை மயக்கம்
5. திணை, பால், எண், இட வேறுபாடு
6. நால்வகைச் சொற்கள் (பெயர், வினை, இடை, உரி)
7. அகரவரிசைப் படுத்துதல்

கற்றலும் பயன்பாடும்:

தமிழ் மொழியின் இலக்கிய வளங்களின் மதிப்பைப் புரிதல். தமிழ் இலக்கிய வாசிப்பின் வழி சமூக விழிப்புணர்வைத் தூண்டுதல். தமிழ் இலக்கிய வளங்களின் வாயிலாகத் தமிழ்ப்பண்பாட்டை அடுத்த தலைமுறைக்குக் கொண்டுசெல்லுதல். மொழிவளத்தின் தேவையை வலியுறுத்துதல். மாணவர்கள் பிழையின்றி எழுத மொழிப்பயிற்சி உதவுகிறது.

இப்பாடத்திட்டம் மாணவர்கள் தங்கள் படைப்புகளை உருவாக்குவதற்கும் பயன்படுகிறது. போட்டித்தேர்வுகளை எதிர்கொள்ளுவதற்குரிய வகையில் இலக்கிய வரலாற்றுப்பகுதி மிகுந்த பயனுடையதாய் உள்ளது.

பாடநூல்

சென்னைப்பல்கலைக்கழகம் (university of Madras)

- அடித்தளப் படிப்பு - பகுதி - I தமிழ்

முதலாம் மற்றும் இரண்டாம் பருவங்களுக்குரியது. அனைத்துப் பட்டப்படிப்பு பிரிவுகளுக்கும் ஐந்தாண்டு ஒருங்குமுறை பட்ட மேற்படிப்புப் பிரிவுகளுக்கும் பொதுவானது.

தாள் -I - செய்யுள் திரட்டு

(Foundation Course Part - I Tamil - For I & II Semesters Common to all undergraduate course and Five-Year Integrated postgraduate courses. (2020 - 2021 onwards.)

- நாற்காலிக்காரர் - நா.முத்துசாமி
- தமிழ் இலக்கிய வரலாறு பாடம் தழுவியவை
- மொழிப்பயிற்சி

Reference book

தமிழ் - பகுதி 4 - சென்னைப் பல்கலைக்கழகம் வடிவமைத்த பாடத்திட்டங்கள் ஆகையால் குறிப்புதவி நூல் என்று தனியாக இல்லை. (Reference book not applicable)

SEMESTER I	Subject title	subject code	Credit
	FRENCH -I	CLK1S	3

COURSE OBJECTIVES

In teaching French we aim to

-provide the learners with a basic knowledge of grammar and gradually give them an insight into the culture and literature of France
-enable them to comprehend the nuances of the language so they are better equipped to express themselves in French
-discover another world , another people , another way of life .
-make them more accepting of people who differ from them

Prescribed textbook:
> Régine Mérieux & Yves Loiseau, Latitudes 1, Paris, Didier, 2017 (Units 1-6 only). Unité 1 - Salut! Saluer - entrer en contact avec quelqu'un - se présenter- s'excuser

Unité 2 –

Enchanté ! Demander de se présenter - Présenter quelqu'un

Unité 3 –

J'adore ! Exprimer ses goûts - Échanger sur ses projets

Unité 4 –

Tu veux bien ? Demander à quelqu'un de faire quelque chose - Demander poliment - Parler d'actions passées

Unité 5 –

On se voit quand ? Proposer , accepter, refuser une invitation. - Indiquer la date - Prendre et fixer un rendez-vous - Demander et indiquer l'heure

Unité 6 –

Bonne idée ! Exprimer son point de vue positif et négatif - S'informer sur le prix - S'informer sur la quantité - Exprimer la quantité .

COURSE OUTCOMES
Learners are able
- to comprehend and express themselves well
- to have an interest to look into another world
- to improve communication skills
- to perform well in the University Exams .

Recommend text : Not applicable

SEMESTER I	Subject title	subject code	Credit
	HINDI -I	CLE1E	3

COURSE OBJECTIVES

The objectives of the course is to sensitize the students -

1. To the aesthetic and cultural aspects of literary appreciation and analysis.
2. To introduce modern Hindi Prose to the students and to understand the cultural, social and moral values of modern Hindi Prose.
3. To familiarize Official correspondence, General letter correspondence and technical words.
4. To motivate to demonstrate human value in different life situations

SYLLABUS

LESSONS PRESCRIBED:

1. Sabhyata ka Rahasya
2. Mitrata
3. Yuvavon sen
4. Paramanu Oorja evam Khadya Padarth Sanrakshan
5. Yougyata aur Vyavasay ka Chunav.

II. FUNCTIONAL HINDI & LETTER WRITING

Students are expected to know the office and Business Procedures, Administrativeand Business Correspondence.

1. General Correspondence:
    1. Personal Applications
    2. Leave Letters
    3. Letter to the Editor
    4. Opening an A/C
    5. Application for Withdrawal
    6. Transfer of an A/C
    7. Missing of Pass Book / Cheque Leaf
    8. Complaints
    9. Ordering for Books
    10. Enquiry

III. OFFICIAL CORRESPONDENCE:

1. Government Order
2. Demi Official Letter
3. Circular
4. Memo
5. Official Memo
6. Notification
7. Resolution
8. Notic

e BOOKS FOR
REFERENCE :

1. Karyalayeen Tippaniya :Kendriya Hindi Sansthan, Agra
2. Prayojan Moolak Hindi :Dr. Syed Rahamathulla, Poornima Prakashan
   4/7, Begum III Street, Royapettah, Chennai – 14.

UNITISED SYLLABUS

UNIT-I

1. Sabhyata ka Rahasya
2. Personal Applications
3. Leave Letters
4. Government Order
5. Administrative Terminology Hindi to English (25 Words)

UNIT - II

1. Mitrata
2. Letter to the Editor
3. Opening an A/C
4. Demi Official Letter
5. Administrative Terminology English to Hindi (25 Words)

UNIT-III

1. Yuvavon Se
2. Application for Withdrawal
3. Circular
4. Memo
5. Administrative Terminology Hindi to English (25 Words)

UNIT-IV

1. Paramanu Oorja evam Khadya Padarth Sanrakshan
2. Transfer of an A/C
3. Missing of Pass Book / Cheque Leaf
4. Official Memo
5. Administrative Terminology English to Hindi (25 Words)

UNIT-V

1. Yougyata aur Vyavasay ka Chunav
2. Complaints
3. Ordering for Books
4. Notification
5. Official Noting Hindi to English (25 words)

UNIT-VI

1. Enquiry
2. Resolution
3. Notice
4. Official Noting English to Hindi (25 words)

COURSE OUTCOMES:

1. Understanding the concept and importance of functional Hindi
2. Understanding various forms of functional Hindi and its usage according to its area of application
3. Knowledge about good civilization qualities and culture.
4. Knowledge about the importance of human values.

SEMESTER I	Subject title	subject code	Credit
	ENGLISH -I	LZ11A	3

COURSE OBJECTIVES

- To give English language skill practice to students to enhance their English proficiency.
- To expose students to native speakers‟ spoken language to enable students to recognize native speakers‟ accent and language usage.
- To simulate real life situations in the classroom to practice real English dialogues and speeches to gain English language fluency.
- To give both silent and loud reading practice to students, to enhance their comprehension and English sound recognition skills
- To help students overcome their fear and to speak in English in front of their peers and teachers thus, build their self-confidence through various classroom activities and outdoor activities

COURSE OUTCOMES:

- The course seeks to develop the students' abilities in grammar, oral skills, reading, writing and study skills
- Students will heighten their awareness of correct usage of English grammar in writing and speaking
- Students will improve their speaking ability in English both in terms of fluency and comprehensibility
- Students will give oral presentations and receive feedback on their performance
- Students will increase their reading speed and comprehension of academic articles

• Students will improve their reading fluency skills through extensive reading

SYLLABUS

Unit V (18 hours) 1. Listening and Speaking a. Participating in a Group Discussion 2. Reading and writing a. Reading diagrammatic information – interpretations maps, graphs and pie charts b. Writing short essays using the language of comparison and contrast 3. Grammar in Context: Voice (showing the relationship between Tense and Voice)	199 - 231 199 - 203 204 - 216 217 – 231

SEMESTER I	Subject title	subject code	Credit
	CORE I-PROBLEM SOLVING USING PYTHON	**SE21A**	**4**

COURSE OBJECTIVES

• Describe the core syntax and semantics of Python programming language.

• Discover the need for working with the strings and functions.

• Illustrate the process of structuring the data using lists, dictionaries, tuples and sets.

• Understand the usage of packages and Dictionaries.

SYLLABUS

UNIT – I Introduction: The essence of computational problem solving – Limits of computational problem solving-Computer algorithms-Computer Hardware-Computer Software-The process of computational problem solving-Python programming language - Literals - Variables and Identifiers - Operators - Expressions and Data types.

UNIT - II Control Structures: Boolean Expressions - Selection Control - If Statement- Indentation in Python- Multi-Way Selection -- Iterative Control- While Statement- Infinite

loops- Definite vs. Indefinite Loops- Boolean Flags and Indefinite Loops. Lists: List Structures - Lists in Python - Iterating over lists in Python.

UNIT - III Functions: Program Routines- Defining Functions- More on Functions: Calling Value-Returning Functions- Calling Non-Value-Returning Functions- Parameter Passing - Keyword Arguments in Python - Default Arguments in Python-Variable Scope.

UNIT - IV Objects and their use: Software Objects - Turtle Graphics – Turtle attributes-Modular Design: Modules - Top-Down Design - Python Modules - Text Files: Opening, reading and writing text files - String Processing - Exception Handling.

UNIT - V Dictionaries and Sets: Dictionary type in Python - Set Data type. Object Oriented Programming using Python: Encapsulation - Inheritance – Polymorphism. Recursion: Recursive Functions.

COURSE OUTCOMES:

• To Understand the principles of Python and acquire skills in programming in python

• To develop the emerging applications of relevant field using Python

• Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.

• Able to develop simple turtle graphics programs in Python

TEXT BOOK

1. Charles Dierbach, “Introduction to Computer Science using Python - A computational Problem solving Focus”, Wiley India Edition, 2015.

REFERENCE BOOKS:

1. Mark Lutz, “Learning Python Powerful Object Oriented Programming”, O’reilly Media 2018, 5th Edition.

2. Timothy A. Budd, “Exploring Python”, Tata MCGraw Hill Education Private Limited 2011, 1st Edition

3. Allen Downey, Jeffrey Elkner, Chris Meyers, “How to think like a computer scientist: learning with Python”, 2012.

4. Sheetal Taneja & Naveen kumar, “Python Programming a Modular approach – A Modular approach with Graphics, Database, Mobile and Web applications”, Pearson, 2017.

5. Ch Satyanarayana M Radhika Mani, B N Jagadesh, “Python programming”, Universities Press 2018.

WEB REFERENCES

➢ http://interactivepython.org/courselib/static/pythonds
➢ http://www.ibiblio.org/g2swap/byteofpython/read/
➢ http://www.diveintopython3.net/
➢ http://greenteapress.com/wp/think-python-2e/
➢ NPTEL & MOOC courses titled Python programming
➢ http://spoken-tutorial.org/tutorial-search/?search_foss=Python&search_language=English
➢ http://docs.python.org/3/tutorial/index.html

MAPPING-COURSE OUTCOME WITH PROGRAMME OUTCOME

	PO1	PO2	PO3	PO4	PO5
CO1	S	M	M	M	S
CO2	M	S	S	M	M
CO3	S	M	M	M	M
CO4	M	M	S	M	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER I	**Subject title**	**subject code**	**Credit**
	PRACTICAL I-PROBLEM SOLVING USING PYTHON LAB	**SE211**	**3**

COURSE OBJECTIVES

• To implement the python programming features in practical applications.
• To write, test, and debug simple Python programs.
• To implement Python programs with conditionals and loops.
• Use functions for structuring Python programs.
• Represent compound data using Python lists, tuples, dictionaries, turtles, Files and modules.

LIST OF EXERCISES

1. Program to convert the given temperature from Fahrenheit to Celsius and vice versa depending upon user's choice.
2. Program to calculate total marks, percentage and grade of a student. Marks obtained in each of the five subjects are to be input by user. Assign grades according to the following criteria:
Grade A: Percentage >=80 Grade B: Percentage >=70 and <80
Grade C: Percentage >=60 and <70 Grade D: Percentage >=40 and <60
Grade E: Percentage <40
3. Program, to find the area of rectangle, square, circle and triangle by accepting suitable input
parameters from user.
4. Program to display the first n terms of Fibonacci series.
5. Program to find factorial of the given number using recursive function.
6. Write a Python program to count the number of even and odd numbers from array of N numbers.
7. Python function that accepts a string and calculate the number of upper case letters and lower
case letters.
8. Python program to reverse a given string and check whether the give string is palindrome or
not.
9. Write a program to find sum of all items in a dictionary.
10. Write a Python program to construct the following pattern, using a nested loop

```
1
22
333
4444
55555
666666
7777777
88888888
999999999
```

11. Read a file content and copy only the contents at odd lines into a new file.
12. Create a Turtle graphics window with specific size.
13. Write a Python program for Towers of Hanoi using recursion
14. Create a menu driven Python program with a dictionary for words and their meanings.
15. Devise a Python program to implement the Hangman Game.

COURSE OUTCOMES

- Implement Conditionals and Loops for Python Programs
- Use functions and represent Compound data using Lists, Tuples and Dictionaries
- Understand the numeric or real life application problems and solve them.
- Apply a solution clearly and accurately in a program using Python.
- Apply the best features available in Python to solve the situational problems.

MAPPING-COURSE OUTCOME WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	M	M	S	S
CO2	S	S	S	M	M
CO3	M	M	M	S	M
CO4	S	M	S	M	S
CO5	M	M	S	S	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER I	Subject title	subject code	Credit
	ALLIED I- MATHEMATICS I	**SM3AA**	**5**

COURSE OBJECTIVES

1. To study about summation of binomial series, exponential series, logarithmic series, newtons forward and backward formula, Lagrange's interpolation formula and newton Raphson method.
2. To study about matrix and cayley Hamilton theorem.
3. To solve a polynomial equation of different types.
4. To Define and illustrate the concept of hyperbolic functions and inverse hyperbolic function, Expansion of sinnx, cosnx, tannx and powers of sines and cosines in terms of functions of multiples of x.
5. To acquire knowledge about Successive differentiation, Jacobian, radius of curvature and finding maxima and minima of a function.

SYLLABUS

UNIT I

Algebra And Numerical Methods:

Algebra: Summation of series - simple problems.

Numerical Methods: Operators E,Δ ,∇ , difference tables- Newton-Raphson method- Newton's forward and backward interpolation formulae for equal intervals, Lagrange's interpolation formula.

Chapter 2, Section 2.1.3, 2.2, 2.2.1, 2.3, 2.3.3

Chapter 3, Section 3.4.1 and Chapter 5, Section 5.1 and 5.2.

UNIT II

Matrices: Symmetric, Skew-Symmetric, Orthogonal, Hermetian, Skew-Hermetian and Unitary matrices. Eigen values and Eigen-vectors, Cayley-Hamilton theorem (without proof) – verification- Computation of inverse of matrix using Cayley - Hamilton theorem.

Chapter 4, Section 4.1.1 to 4.1.6, 4.5, 4.5.2, 4.5.3.

UNIT III

Theory Of Equations: Polynomial equations with real coefficients, irrational roots, complex roots, symmetric functions of roots, transformation of equation by increasing or decreasing roots by a constant, reciprocal equation-simple problems.

Chapter 3, Section 3.1 to 3.4.1(omit section 3.2.1)

UNIT IV

Trigonometry:Expansions of $\sin(n\theta)$ and $\cos(n\theta)$ in a series of powers of $\sin\theta$ and $\cos\theta$ - Expansions of $\sin^n\theta$, $\cos^n\theta$, $\tan^n\theta$ in a series of sines, cosines and tangents of multiples of "θ" - Expansions of $\sin\theta$, $\cos\theta$ and $\tan\theta$ in a series of powers of "θ" – Hyperbolic and inverse hyperbolic functions .

Chapter 6, Section 6.1 to 6.3.

UNIT V

Differential Calculus: Successive differentiation, n^{th} derivatives, Leibnitz theorem (without proof) and applications, Jacobians, Curvature and radius of curvature in Cartesian co-ordinates, maxima and minima of functions of two variables- Simple problems

Chapter 1, Section 1.1 to 1.3.1 and 1.4.3.

COURSE OUTCOMES:

Students gain knowledge about

1. basic concepts of Algebra
2. To solve Matrices,
3. To find solutions for a given polynomial.
4. To evaluate Trigonometric functions and
5. To design and solve differential Equations.

Content and treatment as in

Allied Mathematics, Volume I and II, by P. Duraipandian and S. Udayabaskaran, S. Chand Publications

Reference:-

1. S. Narayanan and T.K. Manickavasagam Pillai – Ancillary Mathematics, S. Viswanathan Printers, 1986, Chennai.
2. Allied Mathematics by Dr. A. Singaravelu, Meenakshi Agency.

e-Resources:

1. http://www.themathpaage.com

http://nptel.ac.in

MAPPING-COURSE OBJECTIVES WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	S	S	S	M
CO2	S	S	S	S	S
CO3	M	M	S	S	M
CO4	S	S	M	S	M
CO5	S	M	S	S	M

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER I	Subject title	subject code	Credit
	BASIC TAMIL	**NLT1C**	**2**

பாடத்திட்டத்தின் நோக்கம் **(Objective)**

தமிழ்மொழியைப் பேசவும் எழுதவும் படிக்கவும் தெரியாத மாணவர்கள் அடிப்படைத்தமிழ் பாடம் படித்துப் பயன்பெறும் நோக்கில் பாடத்திட்டம் அமைகிறது. அண்டை மாநிலங்களிலிருந்தும் பிற நாடுகளிலிருந்தும் இளங்கலை, இளம் அறிவியல் பட்டம் பெறும் மாணவர்கள் தமிழ் நாட்டின் மாநில மொழியைப் பேசவும் எழுதவும் துணைபுரியும் வகையில் பாடத்திட்டம் வடிவமைக்கப்பட்டுள்ளது.

இம்மாணவர்கள் முதற்பருவத்தில் தமிழ் மொழியின் எழுத்துக்களை எழுதவும் படிக்கவும் பயிற்சி அளிக்கப்படுகிறது. மேலும் தமிழ் மொழியின் சொல் வகை, தொடரமைப்பு, தமிழில் எண்ணுப்பெயர்கள், உடல் உறுப்புகள், அன்றாட வாழ்விற்குத் தேவையான பொருள்களை அறிந்துகொள்ள வைப்பதே இதன் நோக்கமாகும்.

பாடத்திட்டம் - முதல் பருவம் **(SYLLABUS)**

அலகு **- 1**.

எழுத்துகள்

1. உயிர் எழுத்து, ஆய்த எழுத்து, 2. மெய் எழுத்து , 3. உயிர் மெய் எழுத்து

அலகு **- 2**

சொற்கள்

1. பெயர்ச்சொல், 2. வினை ச்சொல், 3. இடை ச்சொல், 4. உரிச் சொல்

அலகு **-3**.

தொடரமைப்பு

1. எழுவாய், 2. பயனிலை, 3. செயப்படுப் பொருள்

அலகு **-4**.

பிழை நீக்கம்

1. ஒற்றுப் பிழை, 2. எழுத்துப் பிழை, 3. தொடர்ப்பிழை,

அலகு **- 5**

எண்கள், உறவுப் பெயர்கள், வாழ் இடங்களும், பொருள்களும்

அலகு **- 6**

அறிமுகம்

1. விழாக்கள், 2. இயற்கை, 3. உணவு முறைகள்-சுவை-காய்கள்-பழங்கள் போன்றன.

பாடத்திட்டத்தின் பயன்கள் **(Subject Outcome)**

இந்தப் பாடத்தினால் வேற்றுப்புல மாணவர்கள் தமிழகத்தில் பாமர மக்களிடமும் தமிழில் பேச முடியும். தமிழ் மொழியிலுள்ள சிறு சிறு படைப்புகளைப் பார்த்து இலக்கிய இன்பம் பெறமுடியும். தமிழகத்திலுள்ள சுற்றுலாத்தலங்களுக்கு வழிகாட்டி இன்றிப் போய் வருதல்.

பாட நூல்

தமிழ் – பகுதி 4 - சென்னைப் பல்கலைக்கழகம் அடிப்படைத் தமிழுக்குப் பாடத்திட்டங்கள் மட்டுமே வரையறுத்துள்ளது. அதை நூலாக வெளியிடவில்லை. எனவே, பாடநூல் இல்லை.

Reference book

தமிழ் – பகுதி 4 - சென்னைப் பல்கலைக்கழகம் வடிவமைத்த பாடத்திட்டங்கள் ஆகையால் குறிப்புதவிநூல் என்று தனியாக இல்லை. (Reference book not applicable)

SEMESTER I	Subject title	subject code	Credit
	ADVANCED TAMIL	TLT1C	2

பாடத்திட்டத்தின் நோக்கம் **(Objective)**

இப்பாடத்திட்டம் பள்ளிகளில் ஒரு சில வகுப்புகளில் தமிழைப் படித்து தமிழ் மொழியை முழுமையாக அறிந்து கொள்ளாத கல்லூரிகளில் பிற மொழி கற்பவர்களுக்காக வடிவமைக்கப்படுகிறது. இங்கு தமிழ் இலக்கியப்பகுதியும், தமிழிலக்கிய வரலாற்றுப்பகுதியும், மொழிப்பயிற்சியும் பாடமாக அமைகிறது. தமிழ் இலக்கிய இன்பத்தை உணரும் நோக்கிலும் இலக்கிய வளத்தை உணரும் நோக்கிலும் பாடத்திட்டம் உள்ளது.

பாடத்திட்டம் (SYLLABUS)

பாடப்பகுப்பு

IV.இலக்கியம்

V.அதைச் சார்ந்த தமிழிலக்கிய வரலாறு

VI.மொழிப் பயிற்சி

அலகு **-1**

நாட்டுப் புறப்பாடல்

1. பஞ்சம். 2. மானம் விடிவதெப்போ?

அலகு **-2**

புனை கதை

1.” கட்டை விரல்”-சி.என்.அண்ணாதுரை

அலகு **-3**

புதுக்கவிதை

1. ஆடிக்காற்றே -சிற்பி, 2. கடமையைச் செய்-மீரா, 3. இழந்தவர்கள்-அப்துல் ரகுமான்

அலகு **- 4.**

மொழித்திறன்

1. கலைச்சொல்லாக்கம், 2. பொருந்திய சொல் தருதல், 3. பிழை நீக்கி எழுதுதல்

பாடத்திட்டத்தின் பயன்கள் **(Subject Outcome)**

இப்பாடத்தைப் படிப்பதால் தமிழ் மொழியின் இலக்கியஇன்பம், சொல் வளம், புது கலைச்சொல் படைத்தல் போன்றவற்றை உணர உதவுகிறது.

பாட நூல்

தமிழ் – பகுதி 4 - சென்னைப் பல்கலைக்கழகம் அடிப்படைத் தமிழுக்குப் பாடத்திட்டங்கள் மட்டுமே வரையறுத்துள்ளது. அதை நூலாக வெளியிடவில்லை. எனவே, பாடநூல் இல்லை.

Reference book

தமிழ் – பகுதி 4 - சென்னைப் பல்கலைக்கழகம் வடிவமைத்த பாடத்திட்டங்கள் ஆகையால் குறிப்புதவிநூல் என்று தனியாக இல்லை. (Reference book not applicable)

SEMESTER I	Subject title	subject code	Credit
	Basics of Retail Marketing	**CC5AD**	**2**

COURSE OBJECTIVES

1. To enable the students to understand the concepts of retail marketing
2. To teach the students on aspects branding and labeling in retail trade

SYLLABUS

UNIT – I

Retailing – Definition – Retail Marketing – Growth of organized retailing in India – Importance of retailing.

UNIT – II
Functions of Retailing – characteristics of Retailing – Types of Retailing – store retailing – Non-store retailing

UNIT – III
Retail location factors – Branding in retailing – private labeling – Franchising concept.

UNIT – IV
Communication tools used in Retailing – Sales promotion, e-tailing- window display

UNIT - V
Supply chain management – definition – importance – Role of information Technology in retailing.

TEXT BOOKS
1.P.K Madhavan – Introduction to Retailing –Vijay Nicole Imprints Private Limited ,Chennai.
2. John J.Coyle , C. John Langley .JR., Robert A. Novack , Brian J.Gibson – Supply Chain Management A Logisticss Perspective – CENGAGE , New Delhi
3.Joel D.Wisner , Keah – Choon Tan , G.Keong Leong – Principles of Supply Chain Management A Balanced Approach– CENGAGE, New Delhi

REFERENCE BOOKS:
1. Modern Retail Management – J.N.Jain & P.P.Singh Regal Publications , New delhi
2. Retail Management – Suja Nair, Himalaya Publishing house.

COURSE OUTCOMES

- Equip the students to get the knowledge of retail marketing and its segmentation.
- To make the students understand the significance of retail marketing and the functions performed by it.
- To highlight the importance of Supply Chain Management and the role played by Information Technology in the field of retail marketing.

SEMESTER I	Subject title	subject code	Credit
	ENGLISH FOR PHYSICAL SCIENCES	PZ1SA	3

COURSE OBJECTIVES
• To develop the language skills of students by offering adequate practice in professional

contexts.

• To enhance the lexical, grammatical and socio-linguistic and communicative competence of first year physical sciences students

• To focus on developing students' knowledge of domain specific registers and the required language skills.

• To develop strategic competence that will help in efficient communication

• To sharpen students' critical thinking skills and make students culturally aware of the target situation.

COURSE OUTCOMES:

• Recognise their own ability to improve their own competence in using the language

• Use language for speaking with confidence in an intelligible and acceptable manner

• Understand the importance of reading for life

• Read independently unfamiliar texts with comprehension • Understand the importance of writing in academic life

• Write simple sentences without committing error of spelling or grammar SYLLABUS

SYLLABUS

UNIT 1: COMMUNICATION

Listening: Listening to audio text and answering questions

- Listening to Instructions

Speaking: Pair work and small group work.

Reading: Comprehension passages –Differentiate between facts and opinion

Writing: Developing a story with pictures.

Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 2: DESCRIPTION

Listening: Listening to process description.-Drawing a flow chart. Speaking:

Role play (formal context)

Reading: Skimming/Scanning

Reading passages on products, equipment and gadgets. Writing: Process Description –Compare and Contrast Paragraph-Sentence Definition and Extended definition Free Writing.

Vocabulary: Register specific -Incorporated into the LSRW tasks.

UNIT 3: NEGOTIATION STRATEGIES

Listening: Listening to interviews of specialists / Inventors in fields (Subject specific)

Speaking: Brainstorming. (Mind mapping).

Small group discussions (Subject- Specific)

Reading: Longer Reading text.

Writing: Essay Writing (250 words)

Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 4: PRESENTATION SKILLS

Listening: Listening to lectures.

Speaking: Short talks.

Reading: Reading Comprehension passages

Writing: Writing Recommendations

Interpreting Visuals inputs

Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 5: CRITICAL THINKING SKILLS

Listening: Listening comprehension- Listening for information. Speaking: Making presentations (with PPT- practice). Reading: Comprehension passages –Note making.

Comprehension: Motivational article on Professional Competence,

Professional Ethics and Life Skills)

Writing: Problem and Solution essay– Creative writing –Summary writing

Vocabulary: Register specific - Incorporated into the LSRW tasks

SEMESTER II	Subject title	subject code	Credit
	TAMIL II	LA12A	3

பாடத்திட்டத்தின் நோக்கம்

காலந்தோறும் தமிழ் அடைந்துள்ள வளர்ச்சியும் பரந்து விரிந்து கிடக்கும் அதன் ஆழ அகலத்தையும் ஒரு பருந்து பார்வையில் நோக்கும் வகையில் பொதுத்தமிழ்ப் பாடப்பகுதி கட்டமைக்கப்பட்டுள்ளது.

பழந்தமிழ் இலக்கியங்களின் வாயிலாக அறம், பொருள், இன்பம் ஆகியவற்றைப் போதித்தல். பழந்தமிழ் இலக்கியங்களின் இலக்கியச் செறிவையும், சொல் வளங்களையும் உணர வைத்தல்.

பழந்தமிழ்ச் சொற்களின் அருமையைப் புரியவைத்து மொழி கலப்பின்றிப் பேசுவதன் அவசியத்தை வலியுறுத்தல். பழந்தமிழ் மக்களின் வாழ்வியலை எடுத்துரைத்தல். இவையே இப்பாடத்திட்டத்தின் நோக்கமாகும்.

பாடத்திட்டம்

I.இலக்கியம்

II.அதைச் சார்ந்த தமிழிலக்கிய வரலாறு

III.மொழிப் பயிற்சி

அலகு 1

1. நற்றிணை - 87, 88
2. குறுந்தொகை - 46, 88, 89
3. கலித்தொகை - 11 ஆம் பாடல் - "அரிதாய அறன் எய்தி..

அலகு 2

1. அகநானூறு - 86 ஆம் பாடல் (உழுந்து தலைபெய்த)
2. ஐங்குறுநூறு - கிள்ளைப்பத்து

3. *பரிபாடல் -செவ்வேள் 5, கடுவன் இளவெயினார் (1 முதல் 10 வரிகள் - வெற்றி வேல்)*

அலகு 3

1. *புறநானூறு* - 182, 192

2. *பதிற்றுப்பத்து -காக்கைப்பாடினியார், நச்செள்ளையார் பாடல்* (56, 57)

அலகு 4

1. *பத்துப்பாட்டு* - *முல்லைப்பாட்டு*

அலகு 5

1. திருக்குறள் - பொருட்பால் - 3 அதிகாரம் (காலமறிதல், சுற்றந்தழால், கண்ணோட்டம்)

2. நாலடியார் - ஈகை (முதல் 5 பாடல்கள்)

II தமிழிலக்கிய வரலாறு

1. முச்சங்க வரலாறு, பதினெண்மேற்கணக்கு நூல்கள் (எட்டுத்தொகை, பத்துப்பாட்டு)
2. பதினெண்கீழ்க்கணக்கு நூல்கள்

III மொழிப் பயிற்சி

1. இலக்கணக் குறிப்பு (வேற்றுமைத் தொகை, உவமைத் தொகை, பண்புத் தொகை, உம்மைத் தொகை, அன்மொழித் தொகை‥‥வடிவம்) [பத்தியிலிருந்து இலக்கணக் குறிப்புகளைக் கண்டறிதல்]
2. ஒற்று மிகும் மிகா இடங்கள்
3. மரபுத் தொடர்கள் (தமிழ் மரபுத் தொடர்களைக் கண்டறிதல்)

பாடத்திட்டத்தின் பயன்கள்

பழந்தமிழ் இலக்கியங்களின்வழியாக, அக்கால மக்களின் அகவுணர்வுகளையும் அக ஒழுக்கங்களையும் பண்பாட்டையும் உணர்ந்து கொள்ளுதல். பழந்தமிழ் இலக்கிய வாசிப்பின் வழி இயற்கையின் உன்னத மகத்துவத்தைப் புரியவைத்தல்.

தமிழ் இலக்கிய வளங்களின் வாயிலாகத் தமிழ்ப்பண்பாட்டை அடுத்த தலைமுறைக்குக் கொண்டுசெல்லுதல். மொழிவளத்தின் தேவையை வலியுறுத்துதல். மாணவர்கள் பிழையின்றி எழுத மொழிப்பயிற்சி உதவுகிறது.

இப்பாடத்திட்டம் மாணவர்கள் தங்கள் நடிப்பு திறனை வளர்க்கின்றது. போட்டித்தேர்வுகளை எதிர்கொள்வதற்குத் தமிழ் இலக்கிய வரலாற்றுப்பகுதி மிகுந்த பயனுடையதாக அமைகிறது.

பாடநூல்

சென்னைப்பல்கலைக்கழகம் (University of Madras)

அடித்தளப் படிப்பு - பகுதி - I தமிழ்

முதலாம் மற்றும் இரண்டாம் பருவங்களுக்குரியது.

அனைத்துப் பட்டப்படிப்பு பிரிவுகளுக்கும் ஐந்தாண்டு ஒருங்குமுறை பட்ட மேற்படிப்புப் பிரிவுகளுக்கும் பொதுவானது.

தாள் -I - செய்யுள் திரட்டு

(Foundation Course - Part - Tamil

For I & II Semesters

Common to all undergraduate course and Five-Year Integrated postgraduate courses. - 2021 onwards.)

Reference book

தமிழ் - பகுதி 1 - சென்னைப் பல்கலைக்கழகம் வடிவமைத்த பாடத்திட்டங்கள் ஆகையால் குறிப்புதவிநூல் என்று தனியாக இல்லை. (Reference book not applicable)

COURSE OBJECTIVES

SEMESTER II	Subject title	subject code	Credit
	FRENCH II	CLK2T	3

In teaching French, we aim to

-provide the learners with a basic knowledge of grammar and gradually give them an insight into the culture and literature of France

-enable them to comprehend the nuances of the language so they are better equipped to express themselves in French

-discover another world , another people , another way of life .

-make them more accepting of people who differ from them

Prescribed textbook:

> Régine Mérieux & Yves Loiseau, Latitudes 1, Paris, Didier, 2017 (Units 7-12 only).

Unité 7 - c'est où ?
Demander et indiquer une direction - localiser (près de, en face de …)

Unité 8 - N'oubliez pas !
Exprimer l'obligation ou l'interdit - Conseiller

Unité 9 - Belle vue sur la mer !
Décrire un lieu - situer - se situer dans le temps

Unité 10 - Quel beau voyage !
Raconter - décrire les étapes d'une action - exprimer l'intensité et la quantité - interroger

Unité 11 - oh! Joli!
Décrire quelqu'un - comparer - exprimer l'accord ou le désaccord - se situer dans le temps

Unité 12 - Et après ?
Parler de l'avenir - exprimer des souhaits - décrire quelqu'un

COURSE OUTCOMES
Learners are able
- to comprehend and express themselves well
- to have an interest to look into another world
- to improve communication skills
- to perform well in the University Exams .

Recommend text - Not applicable

SEMESTER II	Subject title	subject code	Credit
	HINDI II	CLE2G	3

I. COURSE OBJECTIVES:
The objectives of the course is
1. To appreciate and analyse the dramatic elements in Hindi literature.
2. To understand the distinct features Hindi short stories and One Act Play.
3. To understand the importance and process of translation and the qualities of translators.
4. To understand the importance of vocabularies.

SYLLABUS
I . ONE ACT PLAY (Detailed Study): AATH EKANKI
Edited By: Devendra Raj Ankur, Mahesh Aanand
Vani prakashan, 4695, 21-A Dariyagunj,; New Delhi – 110 002
LESSONS PRESCRIBED :
1. Aurangazeb ki Aakhari Raat
2. Laksmi Ka Swagat

3. Basant Ritu ka Naatak
4. Bahut Bada Sawal
II. SHORT STORIES (Non- Detailed Study): SWARNA MANJARI
Edited by: Dr. Chitti. Annapurna
Rajeswari Publications
21/3, Mothilal Street, (Opp. Ranganathan Street),
T. Nagar, Chennai – 600 017.

LESSONS PRESCRIBED :
1. Mukthidhan
2. Mithayeewala
3. Seb aur Dev
4. Vivah ki Teen Kathayen
III. TRANSLATION PRACTICE : (English to Hindi)

BOOKS FOR REFERENCE :
1. Prayojan Moolak Hindi : Dr. Syed Rahamathulla
   Poornima Prakashan, 4/7, Begum III
   Street, Royapettah, Chennai – 14.
2. Anuvad Abhyas Part III Dakshin Bharat Hindi Prachar Sabha

T. Nagar, Chennai -17.

UNIT – I
1. Auranzeb ki Aakhiri Raat
2. Mukthidhan
3. Practice of Annotation Writing
4. Practice of Summary and Literary evaluation Writing

UNIT – II
1. Laksmi ka Swagat
2. Mithayeewala
3. Practice of Annotation Writing
4. Practice of Summary and Literary evaluation Writing

UNIT-III
1. Basant Ritu ka Natak
2. Seb Aur Dev
3. Practice of Annotation Writing
4. Practice of Summary and Literary evaluation Writing

UNIT-IV
1. Bahut Bada Sawal
2. Vivah ki Teen Kathayen
3. Practice of Annotation Writing
4. Practice of Summary and Literary evaluation Writing

UNIT-V
1. Translation Practice. (English to Hindi)

COURSE OUTCOMES

1. Understand the role of Hindi short stories and One Act Play in the development of the society.

2. Knowledge about the importance of cultural, social and moral responsibility of human beings.
3. Enculcating the habit of book reading to gain knowledge of vocabularies.
4. Understanding the importance of art of translation.

SEMESTER II	Subject title	subject code	Credit
	ENGLISH II	LZ12A	3

COURSE OBJECTIVES

- To give English language skill practice to students to enhance their English proficiency.
- To expose students to native speakers‟ spoken language to enable students to recognize native speakers‟ accent and language usage.
- To simulate real life situations in the classroom to practice real English dialogues and speeches to gain English language fluency.
- To give both silent and loud reading practice to students, to enhance their comprehension and English sound recognition skills
- To help students overcome their fear and to speak in English in front of their peers and teachers thus, build their self-confidence through various classroom activities and outdoor activities

COURSE OUTCOMES

- The course seeks to develop the students' abilities in grammar, oral skills, reading, writing and study skills
- Students will heighten their awareness of correct usage of English grammar in writing and speaking
- Students will improve their speaking ability in English both in terms of fluency and comprehensibility
- Students will give oral presentations and receive feedback on their performance
- Students will increase their reading speed and comprehension of academic articles
- Students will improve their reading fluency skills through extensive reading

SYLLABUS

Unit I (18 hours)

1. Listening and Speaking

a. Listening and responding to complaints (formal situation) b. Listening to problems and offering solutions (informal) 2. Reading and writing

a. Reading aloud (brief motivational anecdotes)

b. Writing a paragraph on a proverbial

expression/motivational idea.

3. Word Power/Vocabulary

a. Synonyms & Antonyms

4. Grammar in Context

● Adverbs Prepositions

Unit II (20 hours)

1. Listening and Speaking

a. Listening to famous speeches and poems

b. Making short speeches- Formal: welcome speech and vote of thanks. Informal occasions- Farewell party, graduation speech

2. Reading and Writing

a. Writing opinion pieces (could be on travel, food, film / book reviews or on any contemporary topic)

b. Reading poetry

b.i. Reading aloud: (Intonation and Voice Modulation) b.ii. Identifying and using figures of speech - simile, metaphor,

personification etc.

3. Word Power

a. Idioms & Phrases

4. Grammar in Context Conjunctions and Interjections

Unit III (18 hours) 1. Listening and Speaking

a. Listening to Ted talks

b. Making short presentations – Formal presentation with PPT, analytical presentation of graphs and reports of multiple kinds

c. Interactions during and after the presentations 2. Reading and writing

a. Writing emails of complaint

b. Reading aloud famous speeches

3. Word Power

a. One Word Substitution

4. Grammar in Context: Sentence Patterns

Unit IV (16 hours)

1. Listening and Speaking

a. Participating in a meeting: face to face and online

b. Listening with courtesy and adding ideas and giving opinions during the meeting and making concluding remarks.

2. Reading and Writing

a. Reading visual texts – advertisements

b. Preparing first drafts of short assignments

3. Word Power

a. Denotation and Connotation

4. Grammar in Context: Sentence Types

Unit V

(18 hours)

1. Listening and Speaking

a. Informal interview for feature writing

b. Listening and responding to questions at a formal interview 2. Reading and Writing

a. Writing letters of application

b. Readers' Theatre (Script Reading)

c. Dramatizing everyday situations/social issues through skits. (writing scripts and performing)

3. Word Power

a. Collocation

4. Grammar in Context: Working With Clauses

SEMESTER II	Subject title	subject code	Credit
	CORE II- COMPUTER ORGANIZATION	SE22A	4

COURSE OBJECTIVES

1. To understand the basic organization of computers and the working of each component and CPU
2. To bring the programming features of 8085 Microprocessor and know the features of latest microprocessors.
3. To understand the Code conversion and its uses.
4. To understand the Assembly language programming for 8085
5. To understand the principles of Interfacing I/O devices and Direct Memory accesses

SYLLABUS

UNIT - I

Data representation: Data types – Complements- fixed point and floating point representation other binary codes. Register Transfer and Microoperations: Register transfer language- Register transfer- Bus and Memory transfers – Arithmetic, logic, and shift micro-operations.

UNIT - II

Central processing unit: General register and stack organizations- instruction formats - Addressing modes- Data transfer and manipulation - program control- RISC - Pipelining - Arithmetic and instruction- RISC pipeline - Vector processing and Array processors.

UNIT - III

Microprocessor Architecture and its Operations - 8085 MPU - 8085 Instruction Set and Classifications. Programming in 8085: Code conversion - BCD to Binary and Binary to BCD conversions - ASCII to BCD and BCD to ASCII conversions - Binary to ASCII and ASCII to Binary conversions.

UNIT - IV

Programming in 8085:BCD Arithmetic - BCD addition and Subtraction - Multibyte Addition and Subtraction - Multiplication and Division. Interrupts The 8085 Interrupt – 8085 Vectored Interrupts –

UNIT - V

Direct Memory Access(DMA)and 8257 DMA controller - 8255A Programmable Peripheral Interface. Basic features of Advanced Microprocessors - Pentium - I3, I5, and I7

COURSE OUTCOMES

1. Describe the major components of a computer system and state their function and purpose
2. Describe the microstructure of a processor
3. Ability to do the code conversion
4. Demonstrate the ability to program a microprocessor in assembly language.
5. Classify and describe the operation DMA and peripheral Interfaces

REFERENCE BOOKS

1. M.M. Mano, “Computer System architecture”. Pearson, Third Edition, 2007
2. R. S. Gaonkar- "Microprocessor Architecture- Programming and Applications with 8085"- 5th Edition- Penram- 2009.
3. Tripti Dodiya & Zakiya Malek, “Computer Organization and Advanced Microprocessors”, Cengage Learning, 2012.
4. Mathur- “Introduction to Microprocessor”- 3rd Edition- Tata McGraw-Hill-1993.
5. P. K. Ghosh and P. R. Sridhar- “0000 to 8085: Introduction to Microprocessors for Engineers and Scientists”- 2nd Edition- PHI- 1995.
6. NagoorKani- “Microprocessor (8085) and its Applications”- 2nd Edition- RBA Publications- 2006.
7. V. Vijayendran- “Fundamentals of Microprocessors – 8085”- S. Viswanathan Pvt. Ltd.- 2008.

MAPPING-COURSE OUTCOME WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	S	M	M	M
CO2	M	S	S	S	S
CO3	S	M	S	S	M
CO4	M	M	M	M	S
CO5	S	M	M	S	M

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER II	Subject title	subject code	Credit
	PRACTICAL II-COMPUTER ORGANIZATION LAB	SE221	3

COURSE OBJECTIVES

1. To understand the programming features and operations of assembly language programs using 8085 microprocessor kit or Simulator
2. To understand the implementation of Arithmetic operators in assembly language programs
3. To efficiently use the data structures in assembly language programs
4. To implement code conversion in assembly language program
5. To understand the implementation of mathematical operations in assembly language programs

LIST OF EXERCISES:

I : Addition and Subtraction
- 1. 8 - bit addition
- 2. 16 - bit addition
- 3. 8 - bit subtraction
- 4. BCD subtraction

II : Multiplication and Division
- l . 8 - bit multiplication
- 2. BCD multiplication
- 3. 8 - bit division

III: Sorting and Searching
- 1. Searching for an element in an array.
- 2. Sorting in ascending order.

3. Finding largest and smallest elements from an array
4. Reversing array elements
5. Block move
6. Sorting in descending order

IV: Code Conversion

l. BCD to Hex and Hex to BCD
2. Binary to ASCII and ASCII to binary
3. ASCII to BCD and BCD to ASCII

V: Applications

1. Square of a single byte Hex number
2. Square of a two digit BCD number
3. Square root of a single byte Hex number
4. Square root of a two digit BCD number

COURSE OUTCOMES

1. Implement the arithmetic operations in assembly language programming
2. Understand the programming logic of 8085 in various aspects
3. Enables to understand the use of data structures in assembly language
4. To implement the code conversion in assembly language program
5. To write assembly language programs for basic mathematical operations

REFERENCE BOOKS

1. V. Vijayendran- "Fundamentals of Microprocessors – 8085"- S. Viswanathan Pvt. Ltd.-2008.
2. Mathur- "Introduction to Microprocessor"- 3rd Edition- Tata McGraw-Hill-1993.

MAPPING-COURSE OUTCOME WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	M	S	S	M
CO2	M	S	S	S	M
CO3	S	S	M	S	M
CO4	S	M	S	S	S
CO5	S	M	M	M	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER II	Subject title	subject code	Credit
	ALLIED II-MATHEMATICS II	SM3AE	5

COURSE OBJECTIVES

1. To acquire Knowledge about Integration and Fourier series.
2. To acquire knowledge About the methods of solving Ordinary Differential Equations and Partial Differential Equations.
3. To know about Laplace transforms.
4. To acquire Knowledge about Vector differentiation.
5. To acquire Knowledge about Vector integration

SYLLABUS

UNIT I

Integral Calculus:Bernoullis formula – Reduction formulae-$\int_0^{\pi/2} {}^0 sin^n x\, dx$, $\int_0^{\pi/2} cos^n x\, dx$, $\int_0^{\pi/2} sin^n x\, cos^m x\, dx$ (m, n being positive integers), Fourier series for functions in $(0,2\pi)$, $(-\pi , \pi)$.

Chapter 2: Section 2.7 & 2.9 , Chapter 4: Section 4.1.

UNIT II

Differential Equations:

Ordinary Differential Equations: second order non- homogeneous differential equations with constant coefficients of the form ay" +by'+ cy = X where X is of the form $e^{\alpha x}$ cos βx and

$e^{\alpha x}$ sin βx -Related problems only.

Partial Differential Equations: Formation, complete integrals and general integrals, four standard types and solving Lagrange's linear equation P p +Q q= R.

Chapter 5: Section 5.2.1, Chapter 6: Section 6.1 to 6.4

UNIT III

Laplace Transforms: Laplace transformations of standard functions and simple properties, inverse Laplace transforms,Application to solution of linear differential equations up to second order- simple problems.

Chapter 7: Section 7.1.1 to 7.1.4& 7.2 to 7.3

UNIT IV

Vector Differentiation: Introduction, Scalar point functions, Vector point functions, Vector differential operator, Gradient,, Divergence, Curl, Solenoidal, irrotational, identities.

Chapter 8, Section 8.1 to 8.4.4

UNIT V

Vector Integration:Line, surface and volume integrals, Gauss, Stoke's and Green's theorems (without proofs). Simple problems on these.

Chapter 8, Section 8.5 to 8.6.3.

COURSE OUTCOMES:

Students gain knowledge about basic concepts of

1. To solve problems under integration.
2. Recall the types of linear homogeneous equations of second order equations .
3. Understand and apply the Laplace Transforms
4. Will gain knowledge about Vector differentiation.
5. Will solve problems related to vector integration.

Content and treatment as in

Allied Mathematics, Volume I and II , P. Duraipandian and S. Udayabaskaran, S. Chand Publications.

Content and treatment as in

Allied Mathematics, Volume I and II , P. Duraipandian and S. Udayabaskaran, S. Chand Publications.

Reference:-

1. S. Narayanan and T.K. Manickavasagam Pillai – Ancillary Mathematics, S. Viswanathan Printers, 1986, Chennai.
2. Allied Mathematics by Dr. A. Singaravelu, Meenakshi Agency.

e-Resources:

1. http://www.sosmath.com
2. http://www.analyzemath.com/Differential_Equations/applications.html

MAPPING-COURSE OBJECTIVES WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	S	S	S	S
CO2	S	S	S	S	M
CO3	S	S	M	S	M
CO4	S	S	S	S	M
CO5	S	M	S	S	M

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER II	**Subject title**	**subject code**	**Credit**
	BASIC TAMIL II	**NLT2D**	**2**

பாடத்திட்டத்தின் நோக்கம் **(Objective)**

தமிழ்மொழியைப் பேசவும் எழுதவும் படிக்கவும் தெரியாத மாணவர்கள் அடிப்படைத்தமிழ் பாடம் படித்துப் பயன்பெறும் நோக்கில் பாடத்திட்டம் அமைகிறது. அண்டை மாநிலங்களிலிருந்தும் பிற நாடுகளிலிருந்தும் இளங்கலை, இளம் அறிவியல் பட்டம் பெறும் மாணவர்கள் தமிழ் நாட்டின் மாநில மொழியைப் பேசவும் எழுதவும் துணைபுரியும் வகையில் பாடத்திட்டம் வடிவமைக்கப்பட்டுள்ளது.

இம்மாணவர்கள் இரண்டாம் பருவத்தில் தமிழ் மொழியிலுள்ள சிறு சிறு இலக்கியப்பகுதிகளைப் படிப்பர். சிறு கதைகள், சுற்றுலாத்தலங்கள், தமிழ் இலக்கியங்களின் வரலாறு ஆகியவற்றைப் புரிந்துகொள்ளும் நோக்கில் பாடத்திட்டம் அமைகிறது.

பாடத்திட்டம் **(SYLLABUS)**

அலகு **-1.**

நீதி நூல்கள்

1. ஆத்திச் சூடி(1-12), 2. கொன்றை வேந்தன்(1-8),

3. திருக்குறள்(5)

1. அகர முதல ..... (1), 2. செயற்கரிய ..... (26), 3. மனத்துக்கண் ..... (34), 4. கற்க கசடறக்..... (391), 5. எப்பொருள் ..... (423).

அலகு **- 2.**

நீதிக் கதைகள்

1. பீர்பால் கதை, 2. பரமார்த்த குரு கதை

அலகு **- 3.**

அறிமுகம்

அ. தமிழ் இலக்கிய வரலாறு - இலக்கியங்கள் புலவர்கள்

ஆ.தமிழக வரலாறு - வரலாற்றுச் சின்னங்கள்- சுற்றுலாத்தலங்கள்- அலுவலகப் பெயர்கள்

இ.பழமொழிகள்.

பாடத்திட்டத்தின் பயன்கள் **(Subject Outcome)**

தமிழ் இலக்கியத்தின் சிறப்பினையும் தமிழ் மொழியின் சிறப்பினையும் மொழிவளத்தையும் அறிந்து கொள்ள உதவுகிறது. தமிழக மக்களின் பண்பாட்டுக்கூறுகளை உணர்ந்து கொள்ளுதல்

பாட நூல்

தமிழ் – பகுதி 4 - சென்னைப் பல்கலைக்கழகம் அடிப்படைத் தமிழுக்குப் பாடத்திட்டங்கள் மட்டுமே வரையறுத்துள்ளது. அதை நூலாக வெளியிடவில்லை. எனவே, பாடநூல் இல்லை.

Reference book

தமிழ் – பகுதி 4 - சென்னைப் பல்கலைக்கழகம் வடிவமைத்த பாடத்திட்டங்கள் ஆகையால் குறிப்புதவிநூல் என்று தனியாக இல்லை. (Reference book not applicable)

SEMESTER II	Subject title	subject code	Credit
	ADVANCED TAMIL II	TLT2D	2

பாடத்திட்டத்தின் நோக்கம் **(Objective)**

இப்பாடத்திட்டம் பள்ளிகளில் சில வகுப்புகள் வரையில் மட்டுமே தமிழைப் படித்துக் கல்லூரிகளில் பிற மொழி கற்பவர்களுக்காக வடிவமைக்கப்படுகிறது. இங்கு தொடக்க கால செய்யுள் முதல் தற்கால புதுக்கவிதை வரை உள்ள ஒருசில பகுதிகள் அமைந்துள்ளன. அனைத்துக் கால இலக்கியங்களின் தன்மையை உணர்ந்துகொள்ளுதல். தமிழ் இலக்கியப்பகுதியும், தமிழிலக்கிய வரலாற்றுப்பகுதியும், மொழிப்பயிற்சியும் பாடமாக அமைகிறது.

பாடத்திட்டம் (SYLLABUS)

பாடப்பகுப்பு

VII. இலக்கியம்

VIII. அதைச் சார்ந்த தமிழிலக்கிய வரலாறு

IX. மொழிப் பயிற்சி

அலகு **- 1**

கட்டுரை

1. பெண்ணின் பெருமை-திரு.வி.க

அலகு **-2**.

செய்யுள்

1. புறநானூறு - அ. கெடுகசிந்தை-ஓக்கூர் மாசாத்தியார்,

ஆ. ஈன்று புறந்தருதல் - பொன்முடியார், இ. யாதும் ஊரே - கனியன்பூங்குன்றனார்

ஈ. திருக்குறள் - வான் சிறப்பு முழுமையும்

உ. சிலப்பதிகாரம் - மங்கல வாழ்த்துப் பாடல்

ஊ. திருவாசகம் - வேண்டத்தக்கது

எ. திருவாய்மொழி - உயர்வற

ஏ. இரட்சண்ய யாத்ரிகம் (சிலுவைப்பாடு)-பாடல்எண்-1,3.4

ஐ. சீறாப்புராணம் - வானவர்க்கும்

ஒ. பாரதியார்- நல்லதோர்வீணை

அலகு **-3.**

இலக்கிய வரலாறு

பாடம் தழுவிய இலக்கிய வரலாறு

அலகு **-4.**

மொழிபெயர்ப்பு

ஆங்கிலப் பகுதியைத் தமிழாக்கம் செய்தல்

பாடத்திட்டத்தின் பயன்கள் **(Subject Outcome)**

தமிழ் மொழி, தமிழ் இலக்கியத்தின் தொன்மையை அறிதல். தமிழ் மக்களின் பண்பாட்டைக் கால வாரியாக உணர்ந்து கொள்ளுதல். மொழிபெயர்ப்புத்துறையிலும் செயலாற்ற முடியும்

பாட நூல்

தமிழ் – பகுதி 4 - சென்னைப் பல்கலைக்கழகம் அடிப்படைத் தமிழுக்குப் பாடத்திட்டங்கள் மட்டுமே வரையறுத்துள்ளது. அதை நூலாக வெளியிடவில்லை. எனவே, பாடநூல் இல்லை.

Reference book

தமிழ் – பகுதி 4 - சென்னைப் பல்கலைக்கழகம் வடிவமைத்த பாடத்திட்டங்கள் ஆகையால் குறிப்புதவிநூல் என்று தனியாக இல்லை. (Reference book not applicable)

SEMESTER II	Subject title	subject code	Credit
	BASICS OF BUSINESS INSURANCE	CC5AB	2

COURSE OBJECTIVES

1. To enable the students to understand the concepts and the types of Insurance.
2. To sensitize the students on the role of Government in insurance business and IRDA Act.

SYLLABUS

Unit – I

Introduction to Insurance – Type of Insurance – Principles of Insurance.

Unit – II

Salient features of IRDA Act – Administration of IRDA Act – Regulatory measures of IRDA .

Unit – III

Life insurance products – Term, Whole life, Endowment.

Unit – IV

Introduction to general Insurance – fire, marine and motor insurance.

Unit – V

Government and insurance companies – LIC India- private players in Insurance in India.

Text Books:

1. M.N.Mishra – Insurance, Principles and practice, S. Chand & Co. Ltd., New Delhi
2. Dr.N.Premavathy – Elements of Insurance, Sri Vishnu Publications, Chennai. Dr.A.Murthy – Elements of Insurance, Margham Publications, Chennai .

References:

1. Nalini Prava Tripathy, Prabir Paal – Insurance Theory & Practice, Prentice Hall of India Anand Ganguly – Insurance Management, New Age International Publishers.

COURSE OUTCOMES

✞ Students understand the concepts and the types of Insurance and knows the role of Government in insurance business.

✞ The IRDA Act- its role in regulating the insurance sector.

✞ The various types of life and general insurance available to suit the varied requirements of individuals and the business sector.

SEMESTER II	Subject title	subject code	Credit
	ENGLISH FOR PHYSICAL SCIENCES - II	PZ1SC	3

COURSE OBJECTIVES

The Professional Communication Skills Course is intended to help Learners in Arts and Science colleges,

• Develop their competence in the use of English with particular reference to the workplace situation.

• Enhance the creativity of the students, which will enable them to think of innovative ways to solve issues in the workplace.

• Develop their competence and competitiveness and thereby improve their employability skills.

• Help students with a research bent of mind develop their skills in writing reports and research proposals.

COURSE OUTCOMES

At the end of the course, learners will be able to,

• Attend interviews with boldness and confidence.

• Adapt easily into the workplace context, having become communicatively competent.

• Apply to the Research & Development organisations/ sections in companies and offices with winning proposals.

Unit 1- Communicative Competence

Listening – Listening to two talks/lectures by specialists on selected subject specific topics - (TED Talks) and answering comprehension exercises (inferential questions)

Speaking: Small group discussions (the discussions could be based on the listening and reading passages- open ended questions

Reading: Two subject-based reading texts followed by comprehension activities/exercises

Writing: Summary writing based on the reading passages.

Unit 2 - Persuasive Communication

Listening: listening to a product launch- sensitizing learners to the nuances of persuasive communication

Speaking: debates – Just-A Minute Activities

Reading: reading texts on advertisements (on products relevant to the subject areas) and answering inferential questions

Writing: dialogue writing- writing an argumentative /persuasive essay.

Unit 3- Digital Competence

Listening to interviews (subject related)

Speaking: Interviews with subject specialists (using video conferencing skills)

Creating Vlogs (How to become a vlogger and use vlogging to nurture interests – subject related) Reading: Selected sample of Web Page

(subject area) Writing: Creating Web Pages

Reading Comprehension: Essay on Digital Competence for Academic and Professional Life.

The essay will address all aspects of digital competence in relation to MS Office and how they can be utilized in relation to work in the subject area

Unit 4 - Creativity and Imagination

Listening to short (2 to 5 minutes) academic videos (prepared by EMRC/ other MOOC videos on Indian academic sites – E.g. https://www.youtube.com/watch?v=tpvicScuDy0)

Speaking: Making oral presentations through short films – subject based Reading : Essay on Creativity and Imagination (subject based) Writing – Basic Script Writing for short films (subject based) 2 - Creating blogs, flyers and brochures (subject based) - Poster making – writing slogans/captions (subject based)

Unit 5- Workplace Communication & Basics of Academic

Writing Speaking: Short academic presentation using PowerPoint Reading &

Writing: Product Profiles, Circulars, Minutes of Meeting. Writing an

introduction, paraphrasing

Punctuation (period, question mark, exclamation point, comma, semicolon, colon, dash, hyphen, parentheses, brackets, braces, apostrophe, quotation marks, and ellipsis) Capitalization (use of upper case)

SEMESTER III	Subject title	subject code	Credit
	TAMIL III	LA13A	3

பாடத்திட்டத்தின் அறிமுகம்

சைவம், வைணவம், கிறித்துவம், இசுலாமியம், சித்தர்கள் ஆகிய சமயம் சார்ந்த இலக்கியங்கள் பாடங்களாக வடிவமைக்கப்பட்டுள்ளன. மேலும் சிற்றிலக்கியங்களில் ஒருசில

பகுதிகளும் பாடமாக அமைந்துள்ளன. இந்த இலக்கியங்கள் சார்ந்த வரலாறும் பாடமாக அமைந்துள்ளன. மொழிப்பயிற்சியும் இடம்பெற்றுள்ளது.

பாடத்திட்டத்தின் நோக்கம்

மக்களுக்குரிய வாழ்வியல் நெறிமுறைகளையையே பல சமய இலக்கியங்களும் போதிக்கின்றன என்பதை உணர வைத்தல். பக்திக்கும் அன்றாட வாழ்வியலுக்கும் உள்ள தொடர்பினைப் புரிய வைத்தலே இப்பாடத்திட்டத்தின் நோக்கமாகும்.

சிற்றிலக்கியங்களின் வகைகளையும் யாப்பின் புது வடிவங்களையும் தெரிந்துகொள்ள செய்தல். சிற்றிலக்கிய காலத்தின் பாடுபொருளின் மாற்றத்தை உணரவைத்தல். இறைப்பணியோடு மக்கள் பணி செய்த இறையடியார்களை அடையாளம் காட்டுவதும் இதன் தலையாய நோக்கமாகும்.

தமிழ் மொழியில் சொற்களின் பொருள்கள் காலத்திற்குக் காலம் மாறுபடும் தன்மையினைப் புரியவைத்தல். ஒரு சொல்லுக்கு பல பொருள்கள் காணப்படுவதை உணர வைத்தல். இதன் மூலம் மொழி பயன்பாட்டுக்குச் சொல்வளம் தேவை என்பதை உணர்த்துதல்.

இலக்கிய வரலாற்றைக் கற்பிப்பதன் வாயிலாக இலக்கியத் தோற்றப்பின்னணி அறிந்துகொள்ள செய்தல். இவையே இப்பாடத்திட்டத்தின் நோக்கம் ஆகும்.

பாடப் பகிர்வு

I. இலக்கியம்
II. அதைச் சார்ந்த தமிழிலக்கிய வரலாறு
III. மொழிப் பயிற்சியும் மொழி பெயர்ப்பும்

அலகு **I**

1. காரைக்கால் அம்மையார் - அற்புதத் திருவந்தாதி (பிறந்து மொழி எனத் தொடங்கி 5 பாடல்கள்)
2. தேவாரம் - திருஞானசம்பந்தர் - திருத்தில்லை பதிகம் '**கற்றாங்கு**' எனத் தொடங்கி 11 பாடல்கள்
3. திருநாவுக்கரசர் - மாசில் வீணையும் எனத் தொடங்கி 10 பாடல்கள்
4. சுந்தரர் - பித்தா பிறை சூடி எனத் தொடங்கி 10 பாடல்கள்
5. மாணிக்கவாசகர் - திருப்பள்ளியெழுச்சி 10 பாடல்கள்

***அலகு* 2**

1. ஆண்டாள் - நாச்சியார் திருமொழி - ஏழாம் பத்து
2. பொய்கையாழ்வார் - முதல் பாடல் (முதல் திருவந்தாதி)
3. பூதத்தாழ்வார் - முதல் பாடல் (இரண்டாம் திருவந்தாதி)
4. பேயாழ்வார் - முதல் பாடல் (மூன்றாம் திருவந்தாதி)
5. நம்மாழ்வார் - முதல் பத்து - நான்காம் திருமொழி முதல் 5 பாடல்கள்

அலகு 3

1. தாயுமானவர் - பைங்கிளி கண்ணி (5 கண்ணிகள்)

2. வள்ளலார் - திருவருட்பா – பிள்ளைச் சிறு விண்ணப்பம் (1-5)
3. அருணகிரிநாதர் - விநாயகர் துதி - "நினது திருவடி.." எனத் தொடங்கும் 5 ஆம் பாடல்

அலகு 4

1. சித்தர் பாடல்கள் - திருமூலர் – திருமந்திரம் (270,271,274,275,285)
2. குணங்குடி மஸ்தான் - பராபரக்கண்ணி
3. வேதநாயகம் பிள்ளை - தாய் தந்தையர் வணக்கம் 25-32 வரிகள்
(பெண்மதி மாலை)

அலகு 5

1. முத்தொள்ளாயிரம் – ஏற்கனவே உள்ள பகுதி
2. தமிழ்விடுதூது - முதல் 16 கண்ணிகள்
3. நந்திக்கலம்பகம் - ஏற்கனவே உள்ள பகுதி (61, 96, 100, 105, 110)

II தமிழிலக்கிய வரலாறு

1. பக்தி இலக்கியம் (சைவம், வைணவம், சித்தர்கள், இஸ்லாம், கிறித்துவம்)
2. சிற்றிலக்கியங்கள்

III மொழிப் பயிற்சியும் மொழி பெயர்ப்பும்

ஒரு பொருள் குறித்த பலசொல், பலபொருள் குறித்த ஒரு சொல், பிறமொழிச் சொல் நீக்கல், அலுவலகக் கடிதம் வரைதல், தமிழில் மொழி பெயர்த்தல்

பாடத்திட்டத்தின் பயன்கள்

தமிழில் காணப்படும் அனைத்துச் சமய இலக்கியங்களும் வாழ்க்கைக்குரிய நல்ல விழிகாட்டியாக விளங்குகின்றன. இறைபக்தியின் இன்றியமையாமை உணர்த்துதல்.

சமயச் சான்றோர்கள் தமிழ் மொழிக்கு ஆற்றியுள்ள பங்களிப்புகளை அறிந்து கொள்ளுதல்.

நாயன்மார்களும் ஆழ்வார்களும் தங்கள் புலமையினால் பாசுரங்களைப் படைத்ததோடு நில்லாமல் இசையோடு இசைத்துள்ளமையால் இசையின் தொன்மையினை அறிதல். கிறித்தவ இலக்கியமும் இசுலாமிய இலக்கியமும் தமிழ் மரபில் தோன்றித் தமிழ் மொழிக்குச் சிறப்பு செய்கிறது என்பதைப் புரிந்துகொள்ளுதல்.

பக்தி இலக்கியங்களின் வழி மனதை மேம்படுத்துதலும் வாழ்வியல் முறைகளைப் புரிய வைத்தலுமே இப்பாடத்திட்டத்தின் பயன் ஆகும். மொழிப்பயிற்சியினால் புதுப்புது சொற்களைப் பயன்படுத்த தூண்டுதல்.

தமிழ் இலக்கிய வரலாற்றுப்பகுதி போட்டித்தேர்வுக்கு உறுதுணையாக விளங்குதல் ஆகியவையே பயன் ஆகும்.

பாடநூல்:

- சென்னைப்பல்கலைக்கழகம் (University of Madras)

அடித்தளப் படிப்பு - பகுதி - I பொதுத்தமிழ்

மூன்றாம் மற்றும் நான்காம் பருவங்களுக்குரியது.

அனைத்துப் பட்டப்படிப்பு பிரிவுகளுக்கும் ஐந்தாண்டு ஒருங்குமுறை பட்ட மேற்படிப்புப் பிரிவுகளுக்கும் பொதுவானது.

தாள் -I - செய்யுள் திரட்டு

Foundation Course - Part - Tamil - For III & IV Semesters

Common to all undergraduate course and Five Year Integrated postgraduate courses. 2021 - 2022 onwards.

- தமிழ் இலக்கிய வரலாறு – பாடம் தழுவிய இலக்கிய வரலாறு
- மொழிப்பயிற்சி

Reference book

தமிழ் - பகுதி 1 - சென்னைப் பல்கலைக்கழகம் வடிவமைத்த பாடத்திட்டங்கள் ஆகையால் குறிப்புதவிநூல் என்று தனியாக இல்லை. (Reference book not applicable)

SEMESTER III	Subject title	subject code	Credit
	HINDI – III	CLE3H	3

Prescribed Text Book : Selections in Poetry (2007)

University Publications University of Madras .

Lessons Prescribed :

1. Kabirdas - Saakhi (Dohas from 1 to 10)
2. Surdas - Bramargeet Saar only
3. Tulasidas – Vinay ke Pad only
4. Meera Bai – Pad only
5. Tiruvalluar (Dharmakaand only)
6. Biharilal (Dohas 1 to 5)

2. *Introduction to Hindi Literature (up to Reethikaal)*

Lessons Prescribed :

1. Literary Trends of Veeragatha Kaal (Aadikaal) - Important poets :

1. ChandBaradai 2. Vidhyapathi and their Works

2. Literary Trends of Bhakthi Kaal – Important Poets : 1. Kabirdas 2. Joyasi 3. Tulasidas 4. Surdas and their works

3. Literary Trends of Reethikaal – Important Poets :
1. Bihari 2. Bhushan 3. Ghananan

Reference Books:

1. Hindi Sahithya Ka Itihas
   By: Ramchandra Shukla , Jayabharathi Publications, 217, B, Maya Press Road, Allahabad– 211 003.
2. Hindi Sahithya Yug Aur
   PravrithiyaBy:
   Dr. SivakumarVarma,
   Asok Prakashan Nayi Sarak, New Delhi – 6
3. Hindi Sahithya ka Sybodh Itihas
   By : Babu Gulabroy, Lakshmi Narayanan Agarwas Book Publishers seller,Anupama Plaza-1, Block.No.50, Sanjay Place, Agra- 282002.

Unit wise Syllabus for III Semester

UNIT –I

1. Kabirdas - Saakhi (Dohas from 1 to 10)
2. Literary Trends of Veeragatha Kaal (Aadikaal)
3. Chand Baradai and his Works
4. Vidhyapathi and his works

UNIT - II

1. Surdas - Bramargeet Saar
2. Literary Trends of Bhakthi Kaal
3. Gyan Margi Shakha
4. Important Poet : 1. Kabirdas

UNIT - III

1. Tulasidas – Vinay ke Pad only
2. Literary Trends of Bhakthi Kaal – Prem Margi Shakha
3. Literary Trends of Bhakthi Kaal - Ram Bhakthi Shakha
4. Important Poets – 1. Joyasi and 2. Tulasidas

UNIT - IV

1. Meera Bai – Pad only
2. Tiruvalluar (Dharmakaand only)
3. Literary Trends of Bhakthi Kaal – Krishna Bhakthi Shakha
4. Important Poet – Surdas

UNIT - V

1. Biharilal (Dohas 1 to 5)
2. Literary Trends of Reethikaal
3. Important Poet : Bihari and his works

4. Bhushan and his works and Ghananand and his works

COURSE OUTCOMES:

1.Understanding the role played by the poets of Bhakthi cult in literature and society.

2.Describing the Ram leela and Krishna leela poetry by Thulsidas, Surdas and Meerabai respectively by relating it with philosophy of life.

3.Knowledge about the influence of Rama Bhakthi and Krishna Bhakthi in Indian Religion and literature.

4.Knowledge about Idol worship concepts and the influence of it in the development of Indian culture and Patriotic spirit.

5.Knowledge about the Aadhikaal of its artitect skill , Reethikall of its shringar ras.

6.Knowledge about the Idolless worship and Prem Marga cult of literature .

7.Knowledge about the Histry of Hindi Litrature upto Reethi Kaal.

SEMESTER III	Subject title	subject code	Credit
	FRENCH III	CLK3V	3

COURSE OBJECTIVES

In teaching French we aim to

-provide the learners with a basic knowledge of grammar and gradually give them an insight into the culture and literature of France

-enable them to comprehend the nuances of the language so they are better equipped to express themselves in French

-discover another world , another people , another way of life .

-make them more accepting of people who differ from them

Prescribed textbook:K.Madanagobalane & N.C.Mirakamal, Le français par les textes, Chennai, SamhitaPublications-Goyal Publisher & Distributors Pvt Ltd, 2017

Syllabus :

Grammar components :

- Les pronoms relatifs
- Le passé composé
- L'imparfait
- Le plus-que-parfait
- Le subjonctif
- Le conditionnel

- La comparaison

Texts :

- Les feuilles mortes
- Le vrai père
- Nos études
- Demain des l'aube
- Par une journée d'été
- Une visite inattendue
- L'hiver
- Le librairie

Outcome :

Learners are able
- to comprehend and express themselves well
- to have an interest to look into another world
- to improve communication skills
- to perform well in the University Exams

Recommend text - Not applicable

SEMESTER III	Subject title	subject code	Credit
	ENGLISH III	LZ13B	3

COURSE OBJECTIVES:

- To use literature as a medium to teach/learn grammar, reading, spelling, vocabulary, writing mechanics, creative writing and thinking skills
- To strengthen contextual understanding of the language through texts relevant to specific disciplines and offer scope for imaginative involvement and self-expression
- To stimulate interest in acquiring twenty first century skills
- To engage in self-assessment activities for self- development

To help absorb the values, ethics and attitudes of life and culture expressed in literature

SYLLABUS:

THEME	TEXT	ENGLISH LANGUAGE SKILLS
Ethics	1.1 Humanities vs Sciences *S. Radhakrishnan* **Worksheet 1.1**	Vocabulary skills • Etymology • Etymological derivation of words Grammar skills • Tenses • The simple present vs the present continuous tense • The simple past vs present perfect tense
Learning	1.2 Wings of Fire (An Extract) *A. P. J. Abdul Kalam* **Worksheet 1.2**	Vocabulary skills • One-word substitutes / meanings of expressions Grammar skills • Combining sentences
Society	1.3 On the Rule of the Road *A. G. Gardiner* **Worksheet 1.3**	Vocabulary skills • Some literary devices • Word association Grammar skills • Error identification • Types of questions: Wh- and Yes/No

UNIT 2: POETRY[12 Hours]		
THEME	**TEXT**	**ENGLISH LANGUAGE SKILLS**

Human Values	2.1
	
	Leisure
	W. H. Davies
	
	Worksheet 2.1
		Vocabulary skills
		• Content words and function words
		• Compound words
		Grammar skills
		• Punctuation
		• Use of punctuation marks
		• Conversion of sentences
		  ○ Active and passive voice
		  ○ Reported speech

Science	2.2 The Secret of the Machines *Rudyard Kipling* **Worksheet 2.2**	Vocabulary skills • Commonly confused words • Prefixes and suffixes • Negative prefixes
		Grammar skills • Conversion of word class
Environment	2.3 Water *Ralph Waldo Emerson* **Worksheet 2.3**	Vocabulary skills • Homophones • Homonyms • Homographs Grammar skills • Gerunds • Participles

Sports	2.4 Casey at the Bat *Earnest Lawrence Thayer* **Worksheet 2.4**	Vocabulary skills • Completing words Grammar skills • Phrasal verbs
Satire	2.5 Very Indian Poem in Indian English *Nissim Ezekiel* **Worksheet 2.5**	Vocabulary skills • Metonymy Grammar skills • Integrated grammar activities • Cloze test
UNIT 3: SHORT STORIES[15 Hours]		
THEME	**TEXT**	**ENGLISH LANGUAGE SKILLS**
Attitude	3.1 Witches' Loaves *O. Henry* **Worksheet 3.1**	Pronunciation • Tongue twisters • Pronouncing words of foreign origin • Using a dictionary to understand pronunciation
Fantasy	3.2 The Country of the Blind *H. G. Wells* **Worksheet 3.2**	Writing skills • Descriptive writing • Narrative writing • Writing long essays
Humour	3.3 The Boy Who Broke the Bank *Ruskin Bond* **Worksheet 3.3**	Writing skills • Converting a story into a play

Social Justice	3.4 The Squirrel *Ambai* **Worksheet 3.4**	Writing skills • Filling forms • Letter writing
UNIT 4: NON-FICTION[14 Hours]		
THEME	**TEXT**	**ENGLISH LANGUAGE SKILLS**
Artificial Intelligence	4.1 AI and Literature: The Muse in the Machine *John Thornhill* **Worksheet 4.1**	Writing skills • Writing blogs • Creating vlogs
Social Media	4.2 Facebook Is Making Us Miserable *Daniel Gulati* **Worksheet 4.2**	Writing Skills • Writing emails
Culture	4.3 One World One Culture *Kenneth J. Pakenham, Jo McEntire, Jessica Williams* **Worksheet 4.3**	Writing skills • • Résumés • Cover letters • Format of a cover letter Speaking skills • Introduction to job interviews
Food and	4.4	Writing skills

Nutrition	Portion Size is the Trick!!! *Ranjani Raman* **Worksheet 4.4**	• Argumentativeessays
UNIT 5: SCENES FROM SHAKESPEARE[14 Hours]		
THEME	**TEXT**	**ENGLISH LANGUAGE SKILLS**
Human Nature	5.1 The Merchant of Venice [Act IV, Scene I; Lines 170–419] **Worksheet 5.1**	Writing skills • Recreating a court scene • Role play
	5.2 Henry IV Part I [Act II, Scene 4] **Worksheet 5.2**	Writing skills • Creating a webpage
Formative Assessment [5 Hours]		Unit- end Assessment Tasks I-V

COURSE OUTCOMES:

After completing the course, the students will be able to

- reveal the extent of enhancement of their vocabulary and use them appropriately to communicate in contexts
- become aware of commonly occurring errors and avoid committing them in language use
- rewrite words and sentences by changing their forms and use them appropriately
- show improvement in their pronunciation
- attempt different kinds of writing – essays, emails, blogs, letters etc
- prepare resumes to face interviews
- convert short stories into plays or skit

- role play the scenes and make a dramatic presentation of the scenes
- create a webpage for themselves and others

show their awareness of contemporary issues and themes that are socially relevant by reading texts of different literary genres.

SEMESTER III	Subject title	subject code	Credit
	CORE III-JAVA AND DATA STRUCTURE	SE23A	4

COURSE OBJECTIVES

1. To enable the students to learn the basic concepts of Java programming
2. To use class and objects to create applications
3. To have an overview of interfaces, packages, multithreading and exceptions.
4. To familiarize students with basic data structures and their use in algorithms.

SYLLABUS

Unit I

History and Evolution of Java - Features of Java - Object Oriented Concepts – Bytecode - Lexical
Issues - Data Types – Variables- Type Conversion and Casting- Operators - Arithmetic Operators -
Bitwise - Relational Operators - Assignment Operator - The conditional Operator - Operator Precedence- Control Statements – Arrays.

Unit II

Classes - Objects - Constructors - Overloading method - Static and fixed methods - Inner Classes -
String Class- Overriding methods - Using super-Abstract class - this keyword – finalize() method –
Garbage Collection.

Unit III

Packages - Access Protection - Importing Packages - Interfaces - Exception Handling - Throw and
Throws-The Java Thread Model- Creating a Thread and Multiple Threads - Thread Priorities
Synchronization-Inter thread Communication - Deadlock - Suspending, Resuming and stopping
threads – Multithreading-I/O Streams - File Streams - Applets .

Unit IV

Abstract Data Types(ADTs)-List ADT-Array based implementation-linked list implementation-singly
linked list-doubly linked list-circular linked list-Stack ADT operations-Applications-Evaluating
arithmetic expressions-Conversion of infix to postfix expression-Queue ADT-operations-Applications

of Queues.
Unit V
Trees-Binary Trees- representation - Operations on Binary Trees- Traversal of a Binary Tree -Binary
Search Trees, Graphs-Representation of Graphs - Traversal in Graph -Dijkstra's Algorithm, Depth
First vs Breadth-First Search.

COURSE OUTCOMES

1. Students will be able to develop Java Standalone applications and Applets.
2. Choose the appropriate data structure for modeling a given problem.
3. Able to apply object oriented programming features and concepts for solving given problem
4. Able to use java standard API library to write complex programs .
5. To develop skills in internet programming using applets

TEXT BOOKS:

1. E.Balagurusamy," Programming with Java: A Primer", Tata McGraw Hill 2014, 5th Edition. 2. Mark Allen Weiss, "Data Structures and Algorithms Analysis in C++", Person Education 2014, 4 th Edition.

REFERENCES:

. 1. Herbert Schildt, "JAVA 2: The Complete Reference", McGraw Hill 2018, 11th Edition. 2. Aho, Hopcroft and Ullman, "Data Structures and Algorithms ", Pearson Education 2003. 3. S. Sahni, "Data Structures, Algorithms and Applications in JAVA", Universities Press 2005, 2 nd Edition

WEB REFERENCES:

➢ NPTEL & MOOC courses titled Java and Data Structures
➢ https://nptel.ac.in/courses/106106127/
➢ https://nptel.ac.in/courses/106105191/

MAPPING-COURSE OBJECTIVES WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	S	S	M	M
CO2	M	S	S	M	S
CO3	S	M	S	L	M
CO4	S	M	M	L	S
CO5	M	M	M	M	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER III	Subject title	subject code	Credit
	PRACTICAL III-DATA STRUCTURE USING JAVA LAB	SE231	3

COURSE OBJECTIVES

1. To implement linear and non-linear data structures
2. To understand the different operations of search trees
3. To implement graph traversal algorithms

LIST OF EXERCISES:

1. Write a Java program to implement the Stack ADT using a singly linked list.
2. Write a Java program to implement the Queue ADT using a singly linked list.
3. Write a Java program for the implementation of circular Queue.
4. Write a Java program that reads an infix expression, converts into postfix form
5. Write a Java program to evaluate the postfix expression (use stack ADT).
6. Write a Java program to Insert an element into a binary search tree.
7. Write a Java program to delete an element from a binary search tree.
8. Write a Java program to search for a key element in a binary search tree.
9. Write a Java program for the implementation of BFS for a given graph.
10. Write a Java program for the implementation of DFS for a given graph

COURSE OUTCOMES

1. Write functions to implement linear and non-linear data structure operations.
2. Suggest appropriate linear and non-linear data structure operations for solving a given problem.

3. Use the syntax and semantics of java programming language and basic concepts of OOP.
4. Develops reusable programs using the concepts of inheritance,polymorphism,interfaces and packages
5. Design event driven GUI and web related applications.

MAPPING-COURSE OBJECTIVES WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	M	S	M	M
CO2	S	M	S	M	M
CO3	S	M	S	M	S
CO4	S	M	S	M	S
CO5	S	M	M	M	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER III	Subject title	subject code	Credit
	ALLIED III - STATISTICS I	**SP3AA**	**5**

COURSE OBJECTIVES

- To design data collection plans, analyze data appropriately and interpret and draw conclusions from those analyses
- To use tables, graphs, and charts and play a vital role in presenting the data to draw conclusions
- To study probability and mathematical statistics and in the description and development of statistical procedures,
- To gain knowledge of how to use a limited sample to make intelligent and accurate conclusions about a greater population

SYLLABUS

UNIT - 1: Nature and scope of statistical methods and their limitations - Classification, tabulation and diagrammatic representation of various types of statistical data - Frequency curves and Ogives - Graphical determination of percentiles, quantiles and their uses, Lorenz curve.

UNIT - 2: Sampling from finite population - Simple random sampling, Stratified and systematic random sampling procedures - Estimation mean and total and their standard errors. Concepts of sampling and non-sampling errors.

UNIT - 3: Measures of location - Arithmetic mean, median, mode, Geometric mean, Harmonic mean and their properties - -merits and demerits. Measures of dispersion - Range, mean deviation, quartile deviation, standard deviation, coefficient of variation, skewness andkurtosis - and their properties.

UNIT - 4: Probability of an event - Finitely additive probability space addition and multiplication theorems - Independence of events - conditional probability - Bayes' theorem.

UNIT - 5: Bivariate frequency table and its uses - scatter diagram – Correlation and Regression lines - linear prediction - Rank correlation coefficient - curve fitting by the method of least squares- Partial and multiple correlation coefficients.

COURSE OUTCOME:

- To understand the basic theoretical and applied principles of mathematical statistics
- To understand the fundamentals of probability theory
- To understand the concepts of statistical reasoning andinferential methods
- To apply the statistical methods to realtime data.
- To enhance the skill in description, interpretation and exploratory analysis of data bygraphical and other means

Books for Study References:

- Mode, E.B.: Elements of Statistics - Prentice Hall
- Wilks, S.S.: Elementary Statistical Analysis - Oxford and IBH
- Snedecor, G.W., & Cochran, W.G.(1967): Statistical Methods, Oxford and IBH
- Simpson and Kafka: Basic Statistics
- Burr, I.W.: Applied Statistical Methods, Academic Press
- Croxton, F.E. and Cowden, D.J.: Applied General Statistics, Prentice Hall
- Ostleo, B.: Statistics in Research, Oxford & 1BH

MAPPING-COURSE OUTCOME WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	S	M	M	M
CO2	S	M	S	S	M
CO3	S	M	S	S	M

CO4	M	M	M	S	M
CO5	M	S	S	M	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER III	Subject title	subject code	Credit
	SOFT SKILL III	PSSEC	3

COURSE OBJECTIVES

Courses on Soft skills are intended to improve the communication skills enrich personality development, Computing skills, Quantitative aptitude and knowledge of Foreign language of the students. These courses are intended to enhance the employability of the students.

SYLLABUS

UNIT- I: Communication Skills for effective Business Presentation:
1. Perfecting oral skills
2. Aural skills
3. Reading skills

UNIT- I I: Non Verbal Communication:
1. Cultural codes for effective Business Presentation
2. Business Etiquettes

UNIT- III: Formal and Informal Conversation:
1. Introducing
2. Opening & Closing speeches
3. Inviting
4. Thanking
5. Apologizing
6. Expressing anger
7. Resolving conflict
8. Giving and taking information

UNIT- IV: Etiquettes for Public Speaking
1. Extempore
2. Lectures
3. Interviews
4. Group discussion
5. Telephone conversation
6.Business meetings

UNIT- V: Etiquettes for Business Presentation:
1. Team Presentation
2. Individual presentation

COURSE OUTCOME:

The courses will help to bridge the gap between the skill requirements of the employer or industry and the competency of the students.

SEMESTER IV	Subject title	subject code	Credit
	TAMIL IV	LA14A	3

பாடத்திட்டத்தின் அறிமுகம்

இரட்டைக்காப்பியங்கள், இதிகாச காப்பியம், புராணம், கிறித்துவ காப்பியம், இசுலாமிய காப்பியம், சிற்றிலக்கியங்கள் ஆகியவற்றிலிருந்து தேர்ந்தெடுக்கப்பட்ட பகுதிகள் பாடமாக அமைந்துள்ளன. இந்த இலக்கியங்கள் சார்ந்த வரலாறும் மொழிப்பயிற்சியும் பாடங்களாக இடம்பெற்றுள்ளன.

பாடத்திட்டத்தின் நோக்கம்

காப்பியங்கள் தோன்றிய வரலாற்றுப்பின்னணியையும் வாழ்க்கைக்கூறுகளையும் கற்பதால் கலை இலக்கியங்களின் வேறுபாட்டை உணர வைத்தல். கற்பனை வளமும் சிந்தனைத்திறமும் இலக்கியச்சுவையும் உடைய நீண்ட புனைவே காப்பியங்கள். இத்தகைய இலக்கியங்களின் செழுமையையும் புலவர்களின் திறமையும் சமயஅறக்கோட்பாடுகளையும் எடுத்துரைப்பதே இதன் நோக்கமாகும்.

காப்பிய இலக்கியங்கள் தமிழகத்துக்கும் தமிழ்மொழிக்கும் தமிழ் பண்பாட்டிற்கும் ஏற்ற வகையில் அமைந்துள்ளமையை விளக்கிக் கூறுதல்.

சிற்றிலக்கியங்கள் பாடுபொருளுக்கேற்ப படைக்கப்பட்டுள்ளமையை உணரவைத்தல். இவை சார்ந்த இலக்கிய வரலாற்றினைக் கூறுவதும் இப்பாடத்திட்டத்தின் நோக்கம் ஆகும்.

மொழிப்பயிற்சியில் துறைசார் கலைச்சொற்களை அறிமுகப்படுத்திப் புதிய கலைச்சொற்களை உருவாக்க வைத்தல். ஒவ்வொரு மாணவர்களும் தங்கள் சிந்தனைகளை வெளிகொணரும் வகையில் சிறுகதை, புதுக்கவிதை போன்றவற்றைப் படைக்கத் தூண்டுதல். இதுவே இப்பாடத்திட்டத்தின் நோக்கமாகும்.

பாடத்திட்டம்

பாடப் பகிர்வு -
I இலக்கியம்
II அதைச் சார்ந்த தமிழிலக்கிய வரலாறு
III மொழித் திறன்

அலகு 1

1. சிலப்பதிகாரம் - ஊர் காண் காதை (முழுமையும்)
2. மணிமேகலை - பாத்திர மரபு கூறிய காதை (முழுமையும்)

அலகு 2

1. சீவக சிந்தாமணி - ஏமாங்கத நாட்டு வளம் 10 பாடல்கள் மட்டும்
2. சூளாமணி - 5 பாடல்கள் (நாட்டுச் சருக்கம், நகரச் சருக்கம், தூது சருக்கம், கல்யாணச் சருக்கம், சுயம்வரச் சருக்கம்)

அலகு 3

1. கம்பராமாயணம் - குகப்படலம்
2. பெரியபுராணம் - மெய்ப்பொருள் நாயனார் புராணம்

அலகு 4

1. சீறாப்புராணம் - உடும்பு பேசிய படலம் (முழுமையும்)
2. தேம்பாவணி - வளன் சனித்த படலம் (முழுமையும்)

அலகு 5

1. மீனாட்சியம்மை பிள்ளைத் தமிழ் - சப்பாணி பருவம் - 5 பாடல்கள்
2. திருக்குற்றாலக் குறவஞ்சி - மலைவளம்

II இலக்கிய வரலாறு

1. காப்பிய இலக்கியங்கள்
2. சிற்றிலக்கியங்கள்
3. இஸ்லாமிய இலக்கிய வரலாறு
4. கிறித்துவ இலக்கிய வரலாறு

III மொழித் திறனறிதல்

i. கலைச்சொற்கள்
ii. படைப்பு - சிறுகதை (அ) புதுக்கவிதை

பாடத்திட்டத்தின் பயன்கள்

தனிப்பாடல்களாக இருந்த இலக்கிய வகை நீண்ட நெடிய செய்யுள்களால் மாறிய மரபு வேறுபாட்டை உணர வைத்தல். தமிழ்க் காப்பியங்கள் வாயிலாகப் பழந்தமிழகத்தின் பழமையான புனைவுகள் பற்றி அறிதல். மேலும் அக்கால மக்களின் வாழ்வு, சமயம், அரசியல், பண்பாடு போன்றவை தெரிந்து கொள்ளுதல். பழந்தமிழகத்தின் இயற்கைச்சூழல், காலநிலை ஆகியவற்றைப் புரிந்துகொள்ளுதல். புராணக்கதைகளை விளக்கமாகத் தெரிந்துகொள்ள தூண்டுதல்.

படைப்புகளைச் சொந்தமாக உருவாக்குவதால் ஒவ்வொரு மாணவனின் சிந்தனையும் மனநிலையும் உணர்தல். மேலும் மாணவர்கள் போட்டித்தேர்வுகளில் இவ்விலக்கியம் சார்ந்த கேள்விகளுக்கு விடையளித்தல். ஆகியவை இப்பாடத்திட்டத்தின் பயன்கள் ஆகும்.

பாடநூல்:

- சென்னைப்பல்கலைக்கழகம் (University of Madras)

  அடித்தளப் படிப்பு - பகுதி - I தமிழ்

  மூன்றாம் மற்றும் நான்காம் பருவங்களுக்குரியது.

  அனைத்துப் பட்டப்படிப்பு பிரிவுகளுக்கும் ஐந்தாண்டு ஒருங்குமுறை பட்ட மேற்படிப்புப் பிரிவுகளுக்கும் பொதுவானது.

  தாள் - I - செய்யுள் திரட்டு

  Foundation Course

  Part - Tamil - For I & II Semesters

  Common to all undergraduate course and FiveYear Integrated postgraduate courses. (2021 - 2022 onwards.)

- தமிழ் இலக்கிய வரலாறு
- மொழிப்பயிற்சி

Reference book

- தமிழ் - பகுதி 1 - சென்னைப் பல்கலைக்கழகம் வடிவமைத்த பாடத்திட்டங்கள் ஆகையால் குறிப்புதவிநூல் என்று தனியாக இல்லை. (Reference book not applicable)

SEMESTER IV	Subject title	subject code	Credit
	FRENCH IV	CLG4J	3

COURSE OBJECTIVES

In teaching French we aim to

-provide the learners with a basic knowledge of grammar and gradually give them an insight into the culture and literature of France

-enable them to comprehend the nuances of the language so they are better equipped to express themselves in French

-discover another world , another people , another way of life .

-make them more accepting of people who differ from them

Prescribed textbook:

K.Madanagobalane & N.C.Mirakamal, Le français par les textes, Chennai, Samhita Publications-Goyal Publisher & Distributors Pvt Ltd, 2017

Grammar components:

- Le passé simple
- Temps du passé - Emplois (le passé composé,l'imparfait,le passé simple,le plus-que-parfait)
- L'expression de la cause
- L'expression de la conséquence
- L'expression du but
- L'expression de la concession
- L'expression de la condition et de l'hypothèse

COURSE OUTCOME

Learners are able

- to comprehend and express themselves well
- to have an interest to look into another world
- to improve communication skills
- to perform well in the University Exams

Recommend text – not applicable

SEMESTER III	Subject title	subject code	Credit
	HINDI IV	CLE4J	3

COURSE OBJECTIVES

Objective of the course is to

1. Gain awareness about the social, cultural and literary situations during the Aadhunic Kaal .
2. Gain awareness on the importance of literature in addressing contemporary issues such as an environmental concerns, gender issues, social problems, thereby giving effective solution to such problems.
3. Acquire a comprehensive knowledge of historical, literary and theoretical aspects of Hindi literature, and all the genres of literature leading to the understanding of literary movements from times immemorial**.**
4. Imparting knowledge if Hindi as a world language and make communicate both in speaking and writing in a variety of contexts and genres.
5. Imparting the knowledge about the beginning and the development of modern Hindi literature such drama, short stories, novels, journalism and the famous writers like Acharya Ramachandra Shukla, Bharathendhu Harichandra, etc.
6. Influence of British rule on Indian society.

1. Modern Poetry

Prescribed Text Book : Selections in Poetry

Lessons Prescribed :

1. Asha – (Jayashankar Prasad)
2. Tum Logon se Door (Nagarjun)
3. Kavi Aur Kalpana – (Dhramaveer Bhaarathi)
4. Bharat Ki Aarthi - (Shamsher Bahadhur Singh)
5. Varadan Mangoonga Nahi (Siva Mangal Singh Suman)
6. Anevalon Se Ek Savaal (Bharat Bhooshan Agarwal)

2. *Introduction to Hindi Literature (Aadhunik Kaal)****Lessons Prescribed :***

1. Literary Trends of Chayavaad
2. Literary Trends of Pragathivaad
3. Literary Trends of Nayee Kavita
4. Literary Trends of Hindi Short Stories
5. Literary Trends of Hindi One Act Plays
6. Brief Note on the writers and their works

Maithili Saran Gupta, Jayashankar Prasad, Nirala, Mahadevi Varma, Panth,Dinakar, Premchand, Yashpaal Jainendra Kumar, Mohan Rakesh,

Reference Books :

1. Hindi Sahithya Ka Itihas
   By: Ramchandra Shukla , Jayabharathi Publications, 217, B, Maya Press Road, Allahabad– 211 003.

2. Hindi Sahithya Yug Aur
   PravrithiyaBy:
   Dr. Sivakumar Varma,
   Asok Prakashan Nayi Sarak, New Delhi – 6

3. Hindi Sahithya ka Sybodh Itihas
   By : Babu Gulabroy, Lakshmi Narayanan Agarwas Book Publishers seller,Anupama Plaza-1, Block.No.50, Sanjay Place, Agra- 282002.

Unit wise Syllabus for IV Semester

UNIT -I

1. Asha – (Jayashankar Prasad)
2. Tum Logon se Door (Nagarjun)
3. Literary Trends of Chayavaad

UNIT - II

1. Kavi Aur Kalpana – (Dhramaveer Bhaarathi)
2. Bharat Ki Aarthi - (Shamsher Bahadhur Singh)
3. Literary Trends of Pragathivaad

UNIT - III

1. Varadan Mangoonga Nahi (Siva Mangal Singh Suman)
2. Anevalon Se Ek Savaal (Bharat Bhooshan Agarwal)
3. Literary Trends of Nayee Kavita

UNIT –IV

1. Literary Trends of Hindi Short Stories
2. Literary trends of Hindi One Act Plays

UNIT- V

1. Maithili Saran Gupta, Jayashankar Prasad, Nirala,
2. Mahadevi Varma, Panth, Dinakar, Premchand,
3. Yashpaal Jainendra Kumar, Mohan Rakesh,

COURSE OUTCOMES:

1.Analysing the development of Khadiboli Hindi

2.Knowledge about the reason of emergence of Aadhunik Kaal in Hindi Iiterature.

3.Knowledge about the literary trends of Aadhunik Kaal.

4.Identifying the history of development of Hindi drama, short stories and novels, i.e. prose and journalism.

5.Good knowledge of literature that includes the comprehension of recent developments in Hindi language and literature the world over.

6.Major impact on the development of society, helps shaping civilizations, bringing transformations, changing political systems and exposing injustice by giving detailed preview of human experiences.

7.Understand the impact of modern Hindi literature in social and environmental contexts and need for sustainable development

SEMESTER III	Subject title	subject code	Credit
	ENGLISH IV	LZ14B	3

COURSE OBJECTIVE:

- To use literature as a medium to teach/learn grammar, reading, spelling, vocabulary, writing mechanics, creative writing and thinking skills
- To strengthen contextual understanding of the language through texts relevant to specific disciplines and offer scope for imaginative involvement and self-expression
- To stimulate interest in acquiring twenty first century skills
- To engage in self-assessment activities for self- development
- To help absorb the values, ethics and attitudes of life and culture expressed in literature

SYLLABUS

UNIT 1 : History Makers		
THEME	**TEXTS**	**WRITING SKILLS**
	1.1 My Experience with ALS By Stephen Hawking	• **Gathering details and information – Brainstorming** • **Listing events and experiences** • **Creating Mind Map** • **Pre-Writing, Writing and Rewriting/ Revising**
	1.2 Vikram Sarabhai	**Writing**

		Autobiographical and Memoirs (Writing about one's own personality) • **Biographical, personalities**

UNIT 2 : Self Help Essays		
THEME	**TEXTS**	**Writing about Life experiences and events| (Writing based on facts)**
	2.1 Attitude by Margaret Atwood	• **Journal Writing** • **Social events** • **Festivals** • **Sports**
	2.2 Creativity By Edward de Bono.	• **Travel writing ,** • **Preparing Itineraries** • **Natural calamities,** • **Environment**
UNIT 3 : Contemporary Writings from India		
THEME	**TEXTS**	**Critical / Analytical Writing**
	3.1 The Future of jobs By Amitabh Kant	• **Reading and analysing Media reports** • **Social Media Posts and comments**
	3.2 Education and the English Language By Shashi Tharoor	• **Film review** • **Writing opinions** • **Appraisal**
Unit 4: Regional Indian Literature in Translation		
THEME	**TEXTS**	**ENGLISH**

		LANGUAGE SKILLS **Critical / Analytical Writing**
	4.2 "Some People Laugh, Some People Cry" **by Sri Srinivasa Rao** (Translated from Telugu by V. Narayana Rao and A. K. Ramanujam)	• **Fill in the story ,** • **expanding stories,** • **rewriting tales** • **Comic strips and cartoons**
	4.2 "Some People Laugh, Some People Cry" **by Sri Srinivasa Rao** **(Translated from Telugu by V. Narayana Rao and A. K. Ramanujam)**	➢ **Fill in the story ,** ➢ **expanding stories,** ➢ **rewriting tales** **Comic strips and cartoons**
	4. 3 **The Rogue by Atulananda Goswami.** (Translated from Assamese by the author)	
	SHORT STORY **4.4The Holy Panchayat** **by Premchand** (Translated from Hindi by Reshme Sehgal)	
	4.5 The Card-Sharper's Daughter **by V. M. Basheer** **(** Translated from Malayalam by K. M. Sheriff)	
UNIT 5 : Fiction		
THEME	**TEXTS**	**Writing about Life experiences and events| (Writing based on facts)**
	The White Tiger **By Aravind Adiga** **Harper Collins Publishers**	• **Creative writing** • **Critical thinking**

COURSE OUTCOMES

After completing the course, the students will be able to

- reveal the extent of enhancement of their vocabulary and use them appropriately to communicate in contexts
- become aware of commonly occurring errors and avoid committing them in language use
- rewrite words and sentences by changing their forms and use them appropriately
- show improvement in their pronunciation
- attempt different kinds of writing – essays, emails, blogs, letters etc
- prepare resumes to face interviews
- convert short stories into plays or skit
- role play the scenes and make a dramatic presentation of the scenes
- create a webpage for themselves and others show their awareness of contemporary issues and themes that are socially relevant by reading texts of different literary genres

SEMESTER IV	Subject title	subject code	Credit
	CORE IV- WEB TECHONOLOGY	**SE24A**	**4**

COURSE OBJECTIVES

1. To use PHP and MySQL to develop dynamic web sites for user on the Internet
2. To develop web sites ranging from simple online information forms to complex e-commerce sites with MySQL database, building, connectivity, and maintenance

SYLLABUS

Unit I

Introducing PHP – Basic development Concepts – Creating first PHP Scripts – Using Variable and Operators – Storing Data in variable – Understanding Data types – Setting and Checking variables Data types – Using Constants – Manipulating Variables with Operators.

Unit II

Controlling Program Flow: Writing Simple Conditional Statements - Writing More Complex Conditional Statements – Repeating Action with Loops – Working with String and Numeric Functions.

Unit III

Working with Arrays: Storing Data in Arrays – Processing Arrays with Loops and Iterations – Using Arrays with Forms - Working with Array Functions – Working with Dates and Times.

Unit IV

Using Functions and Classes: Creating User-Defined Functions - Creating Classes – Using Advanced OOP Concepts. Working with Files and Directories: Reading Files-Writing Files-Processing Directories.

Unit V

Working with Database and SQL : Introducing Database and SQL- Using MySQL-Adding and modifying Data Handling Errors – Using SQLite Extension and PDO Extension. Introduction XML - Simple XML and DOM Extension.

COURSE OUTCOMES

1. Understand the general concepts of PHP scripting language for the development of Internet websites.
2. Understand the basic functions of MySQL database program and XML concepts.
3. Learn the relationship between the client side and the server side scripts.
4. Analyze a Webpage and identify its elements and attributes.
5. Create XML documents and schemas.

TEXT BOOK:

1. VikramVaswani, "*PHP A Beginner's Guide*", Tata McGraw Hill 2008.

REFERENCE BOOKS:

1. Steven Holzner , "*The PHP Complete Reference*", Tata McGraw Hill, 2007.
2. Steven Holzer , "*Spring into PHP*", Tata McGraw Hill 2011, 5thEdition.

WEB REFERENCES:

- https://www.w3schools.com/php/
- https://www.phptpoint.com/php-tutorial-pdf/
- http://www.xmlsoftware.com/

MAPPING-COURSE OBJECTIVES WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	S	S	M	S
CO2	S	M	M	M	S
CO3	S	S	S	L	S
CO4	S	S	S	M	S
CO5	S	S	S	M	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER IV	Subject title	subject code	Credit
	PRACTICAL IV-WEB TECHNOLOGY LAB	SE241	3

COURSE OBJECTIVES

1. The objectives of this course are to have a practical understanding about how to write PHP code to solve problems.
2. Display and insert data using PHP and MySQL.
3. Test, debug, and deploy web pages containing PHP and MySQL.
4. It also aims to introduce practical session to develop simple applications using PHP and MySQL.

LIST OF PRACTICALS

1. Write a PHP program which adds up columns and rows of given table
2. Write a PHP program to compute the sum of first n given prime numbers
3. Write a PHP program to find valid an email address
4. Write a PHP program to convert a number written in words to digit.
5. Write a PHP script to delay the program execution for the given number of seconds. 6. Write a PHP script, which changes the colour of the first character of a word
7. Write a PHP program to find multiplication table of a number.
8. Write a PHP program to calculate Factorial of a number.
9. Write a PHP script to read a file, reverse its contents, and write the result back to a new file 10. Write a PHP script to look through the current directory and rename all the files with extension .txt to extension .xtx.
11. Write a PHP script to read the current directory and return a file list sorted by last modification time. (***using filemtime()***)
12. Write a PHP code to create a student mark sheet table. Insert, delete and modify records. 13. From a XML document (email.xml), write a program to retrieve and print all the e-mail addresses from the document using XML
14. From a XML document (tree.xml), suggest three different ways to retrieve the text value 'John' using the DOM:
15. Write a program that connects to a MySQL database and retrieves the contents of any one of its tables as an XML file. Use the DOM

COURSE OUTCOMES

1. Obtain knowledge and develop application programs using Python.
2. Create dynamic Web applications such as content management, user registration, and e-commerce using PHP.
3. To understand the ability to post and publish a PHP website.
4. Develop a MySQL database and establish connectivity using MySQL.
5. Able to write a well-formed /valid XML document.

MAPPING-COURSE OBJECTIVES WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	S	S	M	S
CO2	S	S	S	M	S
CO3	S	S	S	M	S
CO4	S	S	S	M	S
CO5	S	S	S	M	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER IV	**Subject title**	**subject code**	**Credit**
	ALLIED- STATISTICS II	**SP3AB**	**5**

COURSE OBJECTIVES

- To equip students with consequently requisite quantitative skills that they can employand build on in flexible ways
- To describe a data set including both categorical and quantitative variables to supportor refute a statement
- To perform statistical inference in several circumstances and interpret the results in anapplied context
- To demonstrate knowledge of the properties of parametric, semi-parametric andnonparametric testing procedures.

SYLLABUS

UNIT - 1: Concepts of random variable - Mathematical expectation - Moments of random variable (raw and central moments) - Moment generating function - Chebycheff's inequality - simple problems.

UNIT - 2: Standard distributions - Binomial, Poisson and Normal distributions - Fitting of distributions.

UNIT - 3: Concept of sampling distributions - standard error - Tests of significance based ont, Chi-square arid F - distributions with respect to mean, variance and correlation coefficient. Theory of attributes and tests of independence in contingency table.

UNIT - 4: Principle of scientific experiments - Randomization, replication, and local control Analysis of variance - One way and two way classification Analysis of CRD and RBD - Latin square designs. Concepts of factorial experiments (without confounding).

UNIT – 5: Non parametric tests- Comparison between parametric and Non-parametric tests- Sign test- Runs test for one and two sample problems- Wilcoxon signed Rank test- Mann Whitney U test.

COURSE OUTCOME:

- To apply statistical methods to real data using the theory and derived formula
- To understand statistical computing, statistical modelling and its limitations
- To learn to communicate the conclusions and inferences clearly
- To enhance the skills in interpretation analysis of data
- To apply the knowledge of the properties of parametric and non-parametric Testing procedure

Reference Books:

- Mode, E.B.: Elements of Statistics - Prentice Hall
- Wilks, S.S.: Elementary Statistical Analysis - Oxford and IBH
- Snedecor, G.W., & Cochran, W.G.(1967): Statistical Methods, Oxford and IBH
- Simpson and Kafka: Basic Statistics
- Burr, I.W.: Applied Statistical Methods, Academic Press
- Croxton, F.E. and Cowden, D.J.: Applied General Statistics, Prentice Hall
- Ostleo, B.: Statistics in Research, Oxford & 1BH
- Sydney Siegel- Non-parametric Methods for Behavioural Sciences.
- Daniel, W W- Biostatistics.

MAPPING-COURSE OUTCOME WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	S	S	M	M
CO2	S	M	S	M	S
CO3	M	L	S	S	M
CO4	M	S	S	M	M
CO5	S	M	M	M	M

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER III	Subject title	subject code	Credit
	ALLIED STATISTICS I & II PRACTICAL	SP3A1	4

COURSE OBJECTIVES

- To solve appropriate statistical methods to collect, organize, display, and analyzerelevant data
- To solve the problem of mean, variance, standard deviation and proportions
- To solve parametric, semi-parametric and non-parametric testing problems

Applications

- Construction of univariate and bivariate frequency distribution with samples of sizenot proceeding 200
- Diagrammatic and graphical representation of various statistical data and frequencydistributions
- Cumulative frequency curve and Lorenz curves
- Computation of various measures of location, dispersion, moments, skewness andkurtosis
- Curve fitting by the method of least squares

(i) y = ax + b; (ii) y = ax2 + bx + C; (iii) y = aebx (iv) y = axb

- Computation of correlation coefficients - regression lines (raw data and grouped data)

- correlation coefficients, Partial and Multiple Correlation coefficients

- Fitting of Binomial, Poisson and Normal distributions and testing goodness of fit
- Large sample test - tests for proportions
- Exact test based on t, Chi-square, and F distributions with regard to mean, varianceand correlation coefficients
- Estimation of mean and r total and their standard errors in simple, stratified andsystematic random sampling procedure
- Analysis of variance - one-way and two-way classifications
- Analysis of CRD, RBD and Latin square designs
- Non-parametric tests

COURSE OUTCOME

- Able to classify and interpret the data by means of diagrams and graph
- Able to calculate and interpret the various measures of central tendency and measures of dispersion
- Able to perform correlation and regression analysis of data

- Able to use different distributions to solve simple practical problems
- Able to perform parametric and non-parametric problems

MAPPING-COURSE OUTCOME WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	M	S	S	M
CO2	S	M	M	S	M
CO3	M	S	M	S	M
CO4	M	S	S	M	L
CO5	S	S	M	S	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER IV	Subject title	subject code	Credit
	ENVIRONMENTAL STUDIES	**ENV4B**	**2**

Unit 1: Introduction to Environmental Studies

· Multidisciplinary nature of environmental studies;

· Scope and importance; concept of sustainability and sustainable development.

Unit 2 : Ecosystem (2 lectures)

· What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: Food chains, food webs and ecological succession, Case studies of the following ecosystem:

a) Forest ecosystem
b) Grassland ecosystem
c) Desert ecosystem
d) Aquatic ecosystem (ponds, stream, lakes, rivers, ocean, estuaries)

Unit 3: Natural Resources : Renewable and Non – renewable Resources (6 lectures) · Land resources and landuse change: Land degradation, soil erosion and desertification. · Deforestation : Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations.

· Water : Use and over –exploitation of surface and ground water, floods, droughts, conflicts over water (international and inter-state).

· Energy resources : Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

Unit 4: Biodiversity and Conservation (8 lecturers)

· Levels of biological diversity: genetics, species and ecosystem diversity, Biogeographic zones of India: Biodiversity patterns and global biodiversity hot spots · India as a mega-biodiversity nation, Endangered and endemic species of India. · Threats to biodiversity: Habitat loss, poaching of wildlife, man- wildlife conflicts, biological invasions; Conservations of biodiversity: In-situ and Ex-situ Conservation of biodiversity.

· Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.

Unit 5: Environmental Pollution (8 lecturers)

· Environmental pollution: types, causes, effects and controls: Air, Water, soil and noise Pollution. · Nuclear hazards and human health risks · Solid waste management: Control measures of urban and industrial waste · Pollution case studies.

Unit 6: Environmental Policies & Practices (8 lecturers)

· Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture

· Environment Laws: Environment Protection Act, Air (Prevention & Control of Pollution) Act; Water (Prevention and Control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD).

· Nature reserves, tribal populations and rights, and human Wildlife conflicts in Indian context.

Unit 7: Human Communities and the Environment (7 lectures)

· Human population growth, impacts on environment, human health and welfare.

· Resettlement and rehabilitation of projects affected persons; case studies.

· Disaster management: floods, earthquake, cyclone and landslides. · Environmental movements : Chipko, Silent Valley, Bishnois of Rajasthan.

· Environmental ethics : Role of Indian and other religions and cultures in environmental conservation.

· Environmental communication and public awareness, case studies(e.g. CNG Vehicles in Delhi)

Unit 8 : Field Work (6 lectures)

· Visit to an area to document environmental assets: river / forest/ flora/ fauna etc.

· Visit to a local polluted site – Urban / Rural/ Industrial/ Agricultural. · Study of common plants, insects, birds and basic principles of identification. · Study of simple ecosystem- pond, river, Delhi Ridge etc.

(Equal to 5 Lectures)

Suggested Readings:

1. Carson , R. 2002.Slient Spring, Houghton Mifflin Harcourt.
2. Gadgil , M.,& Guha, R. 1993.This Fissured Land: An Ecological History of India. Univ.of California Press.

3. Glesson, B. and Low, N.(eds.)1999. Global Ethics and Environment, London, Routledge.
4. Gleick,P.H.1993.Water Crisis. Pacific Institute for Studies in Dev.,Environment & Security. Stockholm Env.Institute, Oxford Univ.Press.
5. Groom, Martha J., Gary K.Meffe, and Carl Ronald Carroll. Principles of Conservation Biology. Sunderland: Sinauer Associates,2006.
6. Grumbine,R.Edward, and Pandit,M.K2013.Threats from India's Himalayas dams .Science,339:36-37
7. McCully,P.1996.Rivers no more :the environmental effects of dams(pp.29-64).Zed books.
8. McNeill,John R.2000.Something New Under the Sun: An Environmental History of the Twentieth Century.
9. Odum,E.P.,Odum, H.T.& Andrees,J.1971.Fundamental of Ecology. Philadelphia Saunders.
10.Pepper,I.L.,Gerba,C.P & Brusseau,M.L.2011.Environmental and Pollution Science. Academic Press.
11. Rao,M.N.& Datta,A.K1987.Waste Water Treatment. Oxford and IBH Publishing Co.Pvt.Ltd.
12. Raven,P.H.,Hassenzahl,D.M & Berg,L.R.2012 Environment.8th edition. John Willey & sons.
13. Rosencranz, A., Divan,S.,& Noble, M.L.2001.Environmental law and policy in India. Tirupathi 1992.
14. Sengupta,R.2003.Ecology and Economics: An approach to sustainable development.OUP
15. Singh,J.S.,Singh,S.P and Gupta,S.R.2014.Ecology,Environmental Science and Conservation. S.Chand Publishing, New Delhi.
16. Sodhi,N.S.,Gibson,L.&Raven ,P.H(eds).2013.Conservation Biology :Voices from the Tropics. John Willey & Sons.
17. Thapar,V.1998.Land of the Tiger: A Natural History of the Indian Subcontinent. 18. Warren,C.E.1971.Biology and water Pollution Control. WB Saunders. 19. Willson,E.O.2006. The Creation: An appeal to save life on earth..New York: Norton. 20. World Commission on Environment and Development.1987.Our Common Future. Oxford University Press.

SEMESTER V	Subject title	subject code	Credit
	OPERATING SYSTEM	SAE5A	4

COURSE OBJECTIVES

- To understand the fundamental concepts and role of Operating System.
- To learn the Process Management and Scheduling Algorithms
- To understand the Memory Management policies
- To gain insight on I/O and File management techniques

SYLLABUS

Unit 1: Introduction: Views –Goals –Types of system – OS Structure – Components –Services - System Structures – Layered Approach -Virtual Machines - System Design and Implementation. Process Management: Process - Process Scheduling – Cooperating Process – Threads - Interprocess Communication. CPU Scheduling : CPU Schedulers – Scheduling criteria – Scheduling Algorithms

Unit-2:– Process Synchronization: Critical-Section problem - Synchronization Hardware – Semaphores – Classic Problems of Synchronization – Critical Region – Monitors. Deadlock :Characterization – Methods for handling Deadlocks – Prevention, Avoidance, and Detection of Deadlock - Recovery from deadlock.

Unit 3: Memory Management : Address Binding – Dynamic Loading and Linking – Overlays – Logical and Physical Address Space - Contiguous Allocation – Internal & External Fragmentation . Non Contiguous Allocation:Paging and Segmentation schemes – Implementation – Hardware Protection – Sharing - Fragmentation.

Unit-4: Virtual Memory :: Demand Paging – Page Replacement - Page Replacement Algorithms – Thrashing. – File System: Concepts – Access methods – Directory Structure – Protection Consistency Semantics – File System Structures – Allocation methods – Free Space Management.

Unit-5 : I/O Systems: Overview - I/O Hardware – Application I/O Interface – Kernel I/O subsystem – Transforming I/O Requests to Hardware Operations – Performance. Secondary Storage Structures : Protection – Goals- Domain Access matrix – The security problem – Authentication – Threats – Threat Monitoring – Encryption..

COURSE OUTCOMES

- Understand the structure and functions of Operating System
- Compare the performance of Scheduling Algorithms
- Analyze resource management techniques
- To understand different approaches to memory management.
- To effectively use system calls for managing processes, memory and the file system.

RECOMMENDED TEXTS

i. Silberschatz A., Galvin P.B., Gange,. 2002 ,
ii. Operating System Principles , Sixth Edition, John Wiley & Sons.

Reference Books

i. H.M. Deitel ,1990, An Introduction to Operating System,- Second Edition, Addis on Wesley

MAPPING-COURSE OUTCOME WITH PROGRAMME OUTCOME

	PO1	PO2	PO3	PO4	PO5
CO1	S	M	S	M	M
CO2	M	S	S	M	M
CO3	M	M	M	S	S
CO4	M	M	S	S	M
CO5	S	M	S	M	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER V	Subject title	subject code	Credit
	DATABASE MANAGEMENT SYSTMEM	SAE5B	4

COURSE OBJECTIVES

1. Gain a good understanding of the architecture and functioning of Database Management Systems.
2. Understand the use of Structured Query Language (SQL) and its syntax
3. Apply Normalization techniques to normalize a database
4. Understand the need of transaction processing and learn techniques for controlling the consequences of concurrent data access.

SYLLABUS

Unit I

Advantages and Components of a Database Management Systems – Feasibility Study – Class Diagrams – Data Types – Events – Normal Forms – Integrity – Converting Class Diagrams to Normalized Tables – Data Dictionary.

Unit II

Query Basics – Computation Using Queries – Subtotals and GROUP BY Command – Queries with Multiple Tables – Subqueries – Joins – DDL & DML – Testing Queries

Unit III

Effective Design of Forms and Reports – Form Layout – Creating Forms – Graphical Objects – Reports – Procedural Languages – Data on Forms – Programs to Retrieve and Save Data – Error Handling.

Unit IV

Power of Application Structure – User Interface Features – Transaction – Forms Events – Custom Reports – Distributing Application – Table Operations – Data Storage Methods – Storing Data Columns – Data Clustering and Partitioning.

Unit V

Database Administration – Development Stages – Application Types – Backup and Recovery – Security and Privacy – Distributed Databases – Client/Server Databases – Web as a Client/Server System – Objects – Object Oriented Databases – Integrated Applications.

COURSE OUTCOMES

1. Understand the basic principles of database management systems.
2. Design Entity-Relationship diagrams to represent simple database application scenarios
3. write SQL queries for a given context in relational database.
4. Discuss normalization techniques with simple examples.
5. Describe transaction processing and concurrency control concepts.

TEXT BOOKS:

G. V. Post – Database Management Systems Designing and Building Business Application – McGraw Hill International edition – 1999.

REFERENCE BOOKS

1. Raghu Ramakrishnan – Database Management Systems – WCB/McGraw Hill – 1998.
2. C.J. Date – An Introduction to Database Systems – 7th Edition – Addison Wesley - 2000.

MAPPING-COURSE OUTCOME WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	M	S	M	M
CO2	M	S	S	S	M
CO3	M	M	S	M	S
CO4	M	L	M	M	S
CO5	M	M	S	M	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER V	Subject title	subject code	Credit
	COMPUTER ARCHITECTURE AND ORGANIZATION	**SAE5C**	**4**

COURSE OBJECTIVES

1. To understand the programming features and operations of assembly language programs using 8085 microprocessor kit or Simulator
2. To understand the implementation of Arithmetic operators in assembly language programs
3. To efficiently use the data structures in assembly language programs
4. To implement code conversion in assembly language program
5. To understand the implementation of mathematical operations in assembly language programs

LIST OF EXERCISES:

I : Addition and Subtraction
- 1. 8 - bit addition
- 2. 16 - bit addition
- 3. 8 - bit subtraction
- 4. BCD subtraction

II : Multiplication and Division
- l . 8 - bit multiplication
- 2. BCD multiplication
- 3. 8 - bit division

III: Sorting and Searching
- 1. Searching for an element in an array.
- 2. Sorting in ascending order.
- 3. Finding largest and smallest elements from an array
- 4. Reversing array elements
- 5. Block move
- 6. Sorting in descending order

IV: Code Conversion
- l. BCD to Hex and Hex to BCD
- 2. Binary to ASCII and ASCII to binary
- 3. ASCII to BCD and BCD to ASCII

V: Applications
- 1. Square of a single byte Hex number
- 2. Square of a two digit BCD number
- 3. Square root of a single byte Hex number
- 4. Square root of a two digit BCD number

COURSE OUTCOMES

1. Implement the arithmetic operations in assembly language programming
2. Understand the programming logic of 8085 in various aspects
3. Enables to understand the use of data structures in assembly language
4. To implement the code conversion in assembly language program
5. To write assembly language programs for basic mathematical operations

REFERENCE BOOKS

1. V. Vijayendran- "Fundamentals of Microprocessors – 8085"- S. Viswanathan Pvt. Ltd.-2008.
2. Mathur- "Introduction to Microprocessor"- 3rd Edition- Tata McGraw-Hill-1993.

MAPPING-COURSE OUTCOME WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	M	S	S	M
CO2	M	S	S	S	M
CO3	S	S	M	S	M
CO4	S	M	S	S	S
CO5	S	M	M	M	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER V	Subject title	subject code	Credit
	PRACTICAL V -RDBMS LAB	**SAE51**	**4**

COURSE OBJECTIVES

This course introduces fundamental programming skills using the Visual Basic Integrated Development environment. Students will learn program design, validation of user input, and howto create menu driven programs and multiple form applications.

SYLLABUS

Create database and performing the operations given below using a Menu Driven program:Insertion, (b)Deletion, (c)Modification, (d)Generating a reports (Simple) for the following Systems using any RDBMS package :

1. Payroll
2. Mark sheet Processing
3. Savings bank account for banking
4. Inventory System
5. Invoice system
6. Library information system

7. Student information system
8. Income tax processing system
9. Electricity bill preparation system
10. Telephone directory maintenance

COURSE OUTCOMES

The student will demonstrate knowledge of visual programming by

1. Creating a visual program to solve a problem.
2. Interpreting a series of instructions used in a visual program.
3. Identifying the basic structures of program
4. Identifying the sequence and understanding decision making techniques.
5. Creating standalone application program.

MAPPING - COURSE OBJECTIVES WITH PROGRAMME OUTCOME

CO\PO	PO1	PO2	PO3	PO4	PO5
CO1	S	S	S	S	S
CO2	S	S	S	M	S
CO3	S	S	S	M	S
CO4	S	S	S	S	S
CO5	S	S	S	M	S

Key: S- Strong, M- Medium/Moderate, L – Low

SEMESTER V	Subject title	subject code	Credit
	VISUAL PROGRAMMING	SEE5A	5

COURSE OBJECTIVES

1. To provide the skills and knowledge required to use essential features and capabilities of Visual BASIC
2. To produce Graphical User Interfaces
3. To write applications in a Windows environment.
4. To have knowledge in basic programming concepts & problem solving.
5. To have knowledge in the design of event-driven programming.

SYLLABUS

Unit 1:

Customizing a Form - Writing Simple Programs - Toolbox - Creating Controls - Name Property -Command Button - Access Keys - Image Controls - Text Boxes - Labels - Message Boxes – Grid - Editing Tools - Variables - Data Types - String - Numbers.

Unit-2:

Displaying Information - Determinate Loops - Indeterminate Loops - Conditionals - Built-inFunctions - Functions and Procedures.

Unit 3:

Lists - Arrays - Sorting and Searching - Records - Control Arrays - Combo Boxes - Grid Control- Projects with Multiple forms - DoEvents and Sub Main - Error Trapping.

Unit-4:

VB Objects - Dialog Boxes - Common Controls - Menus - MDI Forms - Testing, Debugging andOptimization - Working with Graphics.

Unit-5 :

Monitoring Mouse activity - File Handling - File System Controls - File System Objects -COM/OLE - automation - DLL Servers - OLE Drag and Drop.

Course Outcomes:

1. Understand Visual Basic applications.
2. Understand how to perform operations and store results.
3. Understand the concept of data-driven programming.
4. Understand the execution flow control in Visual Basicprogramming.
5. Understand loops to do repetition.

Recommended Texts:

1. Gary Cornell - Visual Basic 6 from the Ground up - Tata McGraw Hill - 1999.
Noel Jerke - Visual Basic 6 (The Complete Reference) - Tata McGraw Hill – 1999

Web Reference:

https://www.vbtutor.net

https://www.csus.edu/indiv/s/scanland/mis15/index_htm_files

MAPPING - COURSE OBJECTIVES WITH PROGRAMME OUTCOME

CO\PO	PO1	PO2	PO3	PO4	PO5
CO1	S	M	S	M	M
CO2	S	M	S	M	M
CO3	M	M	S	M	S
CO4	M	S	M	S	M
CO5	S	M	M	M	S

Key: S- Strong, M- Medium/Moderate, L – Low

SEMESTER V	Subject title	subject code	Credit
	VALUE EDUCATION	VAE5Q	2

COURSE OBJECTIVE

Value are socially accepted norms to e valuate objects, persons and situations that form part and parcel of sociality. A value system is a set of consistent values and measures. Knowledge of the values are inculcated through education. It contributes in forming true human being, who are able to face life and make it meaningful. There are different kinds of values like, ethical or moral values, doctrinal or ideological values, social values and aesthetic values. Values can be defined as broad preferences concerning appropriate courses of action or outcomes. As such, values reflect a person's sense of right and wrong or what "ought" to be. There are representative values like, "Equal rights for all", "Excellence deserves admiration". "People should be treated with respect and dignity". Values tend to influence attitudes and behaviour and help to solve common human problems. Values are related to the norms of a culture.

SYLLABUS

UNIT I: Value education-its purpose and significance in the present world – Value system – The role of culture and civilization – Holistic living – balancing the outer and inner – Body, Mind and Intellectual level – Duties and responsibilities.

UNIT II: Salient values for life – Truth, commitment, honesty and integrity, forgiveness and love, empathy and ability to sacrifice, care, unity, and inclusiveness, Self esteem and self confidence, punctuality – Time, task and resource management – Problem solving and decision making skills – Interpersonal and Intra personal relationship – Team work – Positive and creative thinking.

UNIT III: Human Rights – Universal Declaration of Human Rights – Human Rights violations – National Integration – Peace and non-violence – Dr.A P J Kalam's ten points for enlightened citizenship – Social Values and Welfare of the citizen – The role of media in value building.

UNIT IV: Environment and Ecological balance – interdependence of all beings – living and non-living. The binding of man and nature – Environment conservation and enrichment.

UNIT V: Social Evils – Corruption, Cyber crime, Terrorism – Alcoholism, Drug addiction – Dowry – Domestic violence – untouchability – female infanticide – atrocities against women – How to tackle them.

BOOKS FOR REFERENCE

1. M.G. Chitakra: Education and Human Values, A.P.H. Publishing Corporation, New Delhi, 2003.

2. Chakravarthy, S.K: Values and ethics for Organizations: Theory and Practice, Oxford University Press, New Delhi, 1999.

3. Satchidananda, M.K: Ethics, Education, Indian Unity and Culture, Ajantha Publications, Delhi, 1991.

4. Das, M.S. & Gupta, V.K.: Social Values among Young adults: A changing Scenario, M.D. Publications, New Delhi, 1995.

5. Bandiste, D.D.: Humanist Values: A Source Book, B.R. Publishing Corporation, Delhi, 1999.

6. Ruhela, S.P.: Human Values and education, Sterling Publications, New Delhi, 1986.

7. Kaul, G.N.: Values and Education in Independent Indian, Associated Publishers, Mumbai, 1975.

8. NCERT, Education in Values, New Delhi, 1992.

9. Swami Budhananda (1983) How to Build Character A Primer : Rmakrishna Mission, New Delhi.

10. A Culture Heritage of India (4 Vols.), Bharatiya Vidya Bhuvan, Bombay, (Selected Chapters only) 11. For Life, For the future : Reserves and Remains – UNESCO Publication.

12. Values, A Vedanta Kesari Presentation, Sri Ramakrishna Math, Chennai, 1996.

13. Swami Vivekananda, Youth and Modern India, Ramakrishna Mission, Chennai.

14. Swami Vivekananda, Call to the Youth for Nation Building, Advaita Ashrama, Calcutta.

15. Awakening Indians to India, Chinmayananda Mission, 2003.

SEMESTER VI	Subject title	subject code	Credit
	DATA COMMUNICATION AND NETWORKING	SAE6A	4

COURSE OBJECTIVES

- To provide a solid conceptual understanding of the fundamentals of data communications. .
- To learn the basic concepts of data communications.
- To learn the layered architecture of communication protocols.
- To learn digital signal transmission and encoding techniques.
- To learn multiplexing techniques.
- To learn the concepts and techniques in error detection and correction.
- To learn LAN architectures and systems.
- To learn the fundamental issues driving network design.

SYLLABUS

Unit 1 :

Introduction to Data Communication, Network, Protocols & standards and standards organizations - Line Configuration - Topology - Transmission mode - Classification of Network - OSI Model - Layers of OSI Model.

Unit 2 :

Parallel and Serial Transmission - DTE/DCE/such as EIA-449, EIA-530, EIA-202 and x.21 interface - Interface standards - Modems - Guided Media - Unguided Media - Performance - Types of Error - Error Detection - Error Corrections

Unit 3 :

Multiplexing - Types of Multiplexing - Multiplexing Application - Telephone system - Project 802 - Ethernet - Token Bus - Token Ring - FDDI - IEEE 802.6 - SMDS - Circuit Switching - Packet Switching - Message switching - Connection-Oriented and Connectionless services. .

Unit 4 :

History of Analog and Digital Network - Access to ISDN - ISDN Layers - Broadband ISDN - X.25 Layers - Packet Layer Protocol - ATM - ATM Topology - ATM Protocol.

Unit 5 :

Repeaters - Bridges - Routers - Gateway - Routing algorithms - TCP/IP Network, Transport and Application Layers of TCP/IP - World Wide Web.

COURSE OUTCOMES:

CO1: Interpret the components, tools and techniques of communication systems and illustrate the TCP/IP and OSI Reference model and identify their differences in implementation within and across enterprises.

CO2: Explain how information can be sent via communication interfaces and links.

CO3: Determine the various modulation and error detection and correction techniques and their application in communication systems.

CO4: Differentiate between organizational security policies and security mechanisms.

CO5: Be able to analyze the security needs of a small enterprise, design a strategic plan to address those security requirements, and select the appropriate tools to implement the organizational policies.

RECOMMENDED TEXT BOOKS:

1) Behrouz and Forouzan,2001,Introduction to Data Communication and Networking, 2nd Edition,TMH.

Reference Books :

1) Jean Walrand 1998,Communication Networks (A first Course),Second Edition, WCB / McGraw Hill

2) Behrouz and Forouzan,2006,Data Communication and Networking,3nd Edition , TMH

Websites :

i. http://peasonhighered.com/tanenbaum

MAPPING WITH PROGRAMME OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	S	S	M	S
CO2	S	M	S	S	S
CO3	S	S	M	M	S
CO4	M	M	S	M	M
CO5	S	S	M	S	M

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER VI	Subject title	subject code	Credit
	WEB TECHNOLOGY	SAE6B	4

COURSE OBJECTIVES

1. To Provide the basic web technology concepts that are required for developing web applications.
2. Design/develop programs with GUI interfaces
3. The key technology components are descriptive languages, server-side program elements and client-side program elements.
4. To build dynamic web pages with validation using Java Script objects and by applying different event handling mechanisms.
5. To develop modern interactive web applications using ASP, VB Script, Java Script.

SYLLABUS

Unit 1:

Introduction to` VBScript - Adding VBScript Code to an HTML Page - VB Script Basics - VBScript Data Types - VBScript Variables - VBScript Constants - VBScript Operators – mathematical- comparison - logical - Using Conditional Statements - Looping Through Code - VBScript Procedures – type casting variables - math functions –date functions – string functions –other functions - VBScript Coding Conventions - Dictionary Object in VBScript - Err Object

Unit-2:
Introduction to Javascript – Advantages of Javascript – Javascript syntax - Data type – Variable - Array – Operator & Expression – Looping – control structures - Constructor Function – user defined function Dialog Box .

Unit 3:
Javascript document object model – Introduction – Object in HTML – Event Handling – Window object – Document object – Browser object – Form object – Navigator object – Screen object – Build in object – User defined object – Cookies.

Unit-4:
ASP.NET Language Structure – Page Structure – Page event , Properties & Compiler Directives . HTML server controls – Anchor, Tables, Forms, Files . Basic Web server Controls – Lable, Text box, Button, Image Links, Check & radio Button, Hyperlink, Data List Web Server Controls – Check box list. Radio button list, Drop down list, List box, Data grid, Repeater.

Unit-5:
Request and Response Objects, Cookies, Working with Data – OLEDB connection class, command class, transaction class, data adaptor class, data set class. Advanced issues – email, Application issues, working with IIS and page Directives, error handling. Security – Authentication, IP Address, Secure by SSL & Client Certificates 2

COURSE OUTCOMES

- Students are able to develop a dynamic webpage by the use of java script and VB Script
- Design and development of web-pages and web-applications using ASP.NET
- Use of development tools General competencies: - Use of web technology - Retrieval of information, use of documentation and standards
- To develop and deploy real time web applications in web servers and in the cloud.
- Extend this knowledge to .Net platforms.

REFERENCE BOOKS

1.I.Bayross, 2000, Web Enable Commercial Application Development Using HTML, DHTML, Javascript, Perl CGI, BPB Publications.
2. A.Russell Jones, Mastering Active Server Pages 3, BPB Publications.
3. HathleenKalata, Internet Programming with VBScript and JavaScript, Thomson Learning
4. Mike McGrath, XML Harness the Power of XML in easy steps, Dreamtech Publications
5. T.A. Powell, 2002,Complete Reference HTML , TMH.
6. J.Jaworski, 1999, Mastering Javascript, BPB Publications.

MAPPING WITH PROGRAMME OUTCOMES

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	M	S	M	S
CO2	M	M	S	S	S
CO3	S	M	M	M	S
CO4	S	S	S	M	S
CO5	S	M	S	M	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER VI	Subject title	subject code	Credit
	PRACTICAL VI-WEB APPILICATIONS LAB	SAE61	4

COURSE OBJECTIVES:

1.To Analyze a web page and identify its elements and attributes.
2.Create web pages using JavaScript / VB Script(Client side programming) and ASP.NET .
3.This course gives training in web design and applications.
4. To embed social media content into web pages.

SYLLABUS

VB SCRIPT & JAVASCRIPT

1. Write a program outputs the squares, roots, cubes and complements of integers between 1 and 100.
2. Create a calculator.
3. Write a script to Sort numbers and strings
4. Create a program to generate a hit counter
5. Create a program to verify whether email address provided by user is valid or invalid.
6. Write a program to scroll the text on status bar.
7. The form consists of two multiple choice list and one single choice list
a. the first multiple choice list display the major dishes available.
b. the second Multiple choice list display the stocks available.
c. The single choice list display the miscellaneous (Milkshakes, soft drinks, softy available etc.)

8. Write a script to create a digital clock.
9. Create a web page using two image file which switch black and white one another as the mouse pointer moves over the image. Use the On Mouse over and On Mouse event, onDblclick handler
10. Build a WWW page with an image and 3 buttons., Pick three favorite graphics, Label the buttons and make each one swap in the graphic you have chosen
11. Create a frameset that has two frames, side by side.
1. Make the left-hand frame contain a form with 3 radio buttons
2. The buttons should be for three search engines:
a. Yahoo (http://www.yahoo.com)
b. Altavista (http://www.altavista.com)
c. Infoseek (http://www.infoseek.com)
3. When the user clicks on of the option buttons, the frame on the right hand side should be loaded with the right search engine.
12. Write a program to implement Employee database with all validation

ASP
1. Create a login form, to expire, if the user does not type the password within 100 seconds
2. Create an employee database and manipulate the records using command object in ASP
3. Develop an application to illustrate the usage of Request and Response Objects in ASP.
4. Write an ASP program using Request Object to give the exact list of headers sent by the browser to the Web server.
5. Create an Active Server Page to display the records one by one from a student database. The student database should contain roll no, name, marks & total.
6. Design an ASP application that describes books in the Online Bookshop.(Use AD Rotator Component, Content Rotator Component, Content Linking Component)
7. Create a document and add a link to it. When the user moves the mouse over the link it should load the linked document on its own (User is not required to click on the link).
8. Create a document, which opens a new window without a toolbar, address bar, or a status bar that unloads itself after one minute.
9. Create a document that accepts the user's name in a text field form and displays the same the next time when the user visits the site informing him that he has accessed the site for the second time, and so on.

COURSE OUTCOMES
1.Design and implement dynamic websites with good aesthetic sense of designing and latest technical know-how's.
2. To develop web based application using suitable client side and server side web technologies
3. Have a Good grounding of Web Application Terminologies, Internet Tools and other web services.
4. Analyze given assignment to select sustainable web development and design methodology
5. Develop solution to complex problems using appropriate method, technologies, frameworks and web services

Mapping with Programme Outcomes:

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	M	S	M	S
CO2	S	S	S	S	S
CO3	S	M	S	M	S
CO4	S	M	S	S	M
CO5	S	S	S	M	S

Key: S-Strong, M-Medium/Moderate, L-Low

SEMESTER VI	Subject title	subject code	Credit
	DATA MINING	SEE6H	5

COURSE OBJECTIVES

1. To introduce students to the basic concepts and techniques of Data Mining

2. To develop skills of using recent data mining software for solving practical problems.

3. To gain experience of doing independent study and research.

4. Develop and apply critical thinking, problem-solving, and decision-making skills.

5. Develop and apply enthusiasm for learning. Class participation is encouraged in this course.

6. classroom discussions and learning by communicating interest, suggestions for improvements, additional readings and Internet resources, is a major goal. Express diligence, enthusiasm, patience, and thoroughness in dealing with complicated analysis and procedures and less-than- perfect-constantly evolving technology

SYLLABUS

Unit-1: Introduction: Data mining – Functionalities – Classification – Introduction to Data

Warehousing – Data Preprocessing : Preprocessing the Data – Data cleaning – Data Integration

and Transformation – Data reduction

Unit-2: Data Mining, Primitives, Languages and System Architecture: Data Mining – Primitives

– Data Mining Query Language, Architectures of Data mining Systems. Concept Description,

Characterization and Comparison: Concept Description, Data Generalization and summarization,

Mining Class Comparison

Unit-3: Mining Association Rules: Basics Concepts – Single Dimensional Boolean Association

Rules From Transaction Databases, Multilevel Association Rules from transaction databases –

Multi dimension Association Rules from Relational Database and Data Warehouses.

Unit-4: Classification and Prediction: Introduction – Issues – Decision Tree Induction –

Bayesian Classification.Classification based on A-16 2 Concepts from Association Rule Mining

– Other Methods. Prediction – Introduction – Classifier Accuracy.

Unit-5: Cluster Analysis: Introduction – Types of Data in Cluster Analysis, Partitioning

Methods – Hierarchical Methods Density Based Methods – GRID Based Method – Model

based Clustering Method.

COURCE OUTCOMES

1. Understand data mining principles and techniques: Introduce DM as a cutting edge

business intelligence method and acquaint the students with the DM techniques for

building competitive advantage through proactive analysis, predictive modeling, and

identifying new trends and behaviours.

2. Building basic terminology.

3. Learning how to gather and analyze large sets of data to gain useful understanding.

4. Learning how to produce a quantitative analysis report/memo with the necessary

information to make decisions.

5. Describing and demonstrating basic data mining algorithms, methods, and tools

6. Identifying business applications of data mining

7. Overview of the developing areas - web mining, text mining, and ethical aspects of data mining.

REFERENCE BOOKS

1. K.P. Soman , Shyam Diwakar, V.Ajay ,2006, Insight into Data Mining Theory and Practice, Prentice Hall of India Pvt. Ltd - New Delhi.

MAPPING-COURSE OBJECTIVES WITH PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	S	M	S	M	M
CO2	M	S	M	S	M
CO3	S	S	S	M	S
CO4	S	M	S	M	S
CO5	S	S	M	M	S

Key: S-Strong, M-Medium/Moderate, L-LOW

SEMESTER V	Subject title	subject code	Credit
	SOFTWARE ENGINEERING	**SEE6E**	**5**

COURSE OBJECTIVES

- To understand and apply the software development life cycle for a project
- To understand software requirements and the role of project management
- To understand appropriate Design principles to S/W project development
- To understand and implement the software testing approaches with software measurement
- parameters and risks
- To understand quality control and ensure good quality software

SYLLABUS

UNIT - I:

Introduction to Software Engineering: Definitions - Size Factors - Quality and Productivity Factors - Managerial Issues - Planing a software project : Defining the problem - Developing a Solution Strategy - Planning the Development Process - Planning an Organization structure - Other Planning Activities.

UNIT - II:

Software Cost Estimation: Software cost factors - Software Cost Estimation Techniqes - Staffing-level Estimation - Estimating Software Maintenance Costs – The Software Requirements Specification – Formal Specification Techniques - Languages and Processors for Requirements Specification.

UNIT - III:

Software design: Fundamental Design Concepts - Modules and Modularization Criteria - Design Notations - Design Techniques - Detailed Design Considerations - Real-Time and Distributed System Design - Test Plans - Milestones, walkthroughs, and Inspections.

UNIT - IV: Implementation issues: Structured Coding Techniques - Coding Style - Standards and Guidelines - documentation guidelines -Type Checking - Scoping Rules - Concurrency Mechanisms.

UNIT - V:

Quality Assurance - Walkthroughs and Inspections - Static Analysis - Symbolic Execution - Unit Testing and Debugging - System Testing - Formal Verification: Enhancing Maintainability during Development - Managerial Aspects of Software Maintenance - Source Code Metrics - Other Maintenance Tools and Techniques.

COURSE OUTCOMES

- To apply software engineering principles and techniques
- To introduce the methodology of planning, developing and testing a software project
- To develop, maintain and evaluate large-scale software systems
- To produce efficient, reliable, robust and cost-effective software solutions
- To apply the techniques, and skills in the development of a software product.

Reference Text

1. R.Fairley, Software Engineering Concepts, Tata McGraw-Hill Edn. 1997.
2. R.SPressman, Software Engineering, Fourth Ed., McGraw Hill, 1997.

MAPPING-COURSE OBJECTIVES WITH PROGRAMME OUTCOME

	PO1	PO2	PO3	PO4	PO5
CO1	S	M	M	S	S
CO2	S	S	S	M	M
CO3	M	M	M	S	M
CO4	S	M	S	M	S
CO5	M	M	S	S	S

Key: S-Strong, M-Medium/Moderate, L-LOW

Procedure for Awarding Internal Marks

Course	Particulars	Marks
Theory Papers	Tests(2 out of 3)	10
	Attendance	05
	Seminars	05
	Assignments	05
	Total	**25**
Practical Papers	Tests 2 out of 3	**30**
	Attendance	05
	Record	05
	Total	**40**

Awarding Marks for Attendance (out of 5)

(i)Attendance below 60% = 0 marks, 60 % to 75% = 3 marks, 75 % to 90% = 4 marks and above 90%= 5 marks

SEMINARS:

Seminars are assigned to the students based on the topic selected by the couse instructor from the syllabus. Students are expected to collect comprehensive notes on the seminar topic from various books and web resources suggested by the course instructor. Students are informed to use various tools to supplement and oral presentation ,such as visual aids, models etc. seminar are usually assigned for topics that can aid students to do self-study and avoid any vagueness related to the topic.

EVALUTION STANDARDS FOR SEMINAR:

S.NO	Criteria	Max.Marks (5 Marks)
1	Quality of notes collected for the topic	1
2	Presentation Skill	1
3	Fluency of language	1
4	Interacting skills & body language	1
5	Tools used to present	1

ASSIGNMENTS:

Assignments are given at both individual as well as group level. Assignments are given not only on topics from the syllabus but also related topics with latest development in the respective

fields. Assignments help students to awaken their creativity skills and help them to practice as well as enhance their knowledge of the subject.

EVALUTION STANDARDS FOR ASSIGNMENTS:

S.NO	Criteria	Max.Marks (5 Marks)
1	Quality of notes collected for the topic	2
2	Presentation Skill	2
3	Fluency of language & vocabulary usage	1

EXTERNAL ASSESSMNET FOR PRACTICAL

S.NO	Criteria	Max.Marks (60 Marks)
1	Writing Part of Program	30
2	Coding & Execution of Program	20
3	Output	10
	Total	**60**

Question Paper Pattern

Question Paper Pattern for All Semester (University) Examination

SECTION - A		
10 questions Out of 12 questions	10x2	20 Marks
SECTION - B		
5 questions Out of 7 questions	5X5	25 Marks
SECTION - C		
3 questions Out of 5 questions	3X10	30 Marks
	Total	**75 Marks**

Head of the Department **Principal**

SHANTHI RAVICHANDRAN

Digitally signed by SHANTHI RAVICHANDRAN
Date: 2022.11.17 16:44:45 +05'30'