K.M.G COLLEGE OF ARTS AND SCIENCE, GUDIYATTAM

Department of Computer Applications

2022-2023

Programme Outcomes

Upon graduation, students will be able to:

S.NO	OUTCOMES
PO1	Developing the student for roles pertaining to computer applications and IT industry
PO2	Developing the student's skills to work as software programmer, system and network administrator, web designer
PO3	Develop various real time applications using latest technologies and programming languages.
PO4	An ability to handle the skills like computer graphics, web development, trouble shooting, and both in hardware & software.
PO5	Develop practical skills to provide solutions to industry, society and business
PO6	Develop the software projects by understanding the client requirement

SEMESTER - I

Subject Name: COMMUNICATIVE ENGLISH-I   **No. of Hour per week: 6**

Subject Code: FLE10   **Credit: 4**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
I (Regulation 2022-2023)	COMMUNICATIVE ENGLISH-I	4	CO1 – Students can help the learners recognize and operate in various styles and registers in English. CO2-Students are heighten their awareness of correct usage of English grammar in writing and speaking. CO2 - Students can modify their speaking ability in English both in terms of fluency and comprehensibility. CO3 - Students can enable their oral presentations and receive feedback on their performance. CO4 - Students can able to increase their reading speed and comprehension of academic articles. CO5 - Students can improve their reading fluency skills through extensive reading.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	M	S	S	M
CO2	S	M	M	S	S	S
CO3	S	S	M	M	S	S
CO4	S	M	M	M	M	M
CO5	S	S	M	M	S	S

PO – Programme outcome, CO – Course outcome

S - Strong, M - Medium, L – Low (may be avoided)

Subject Name: PROGRAMMING IN C   **No. of Hour per week: 6**

Subject Code: FCA11   **Credit: 4**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
I (Regulation 2022-2023)	Programming in C	4	CO1 – Students can identify the concepts of Constants, Variables, and Data Types, Operators and Expressions. CO2 –Students to analyze the concepts of Managing Input and Output Operations, Decision Making and Branching, Decision Making and Looping CO3 – Students can able to explain the concepts of Arrays, Character Arrays and Strings, User Defined Functions. CO4 – Students can understand the concepts of Structure and Unions, Pointers. CO5 – Students can evaluate the concepts of File Management in C.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	M	S	S	M
CO2	S	M	M	S	S	S
CO3	S	S	M	M	S	S
CO4	S	M	M	M	M	M
CO5	S	S	M	M	S	S

Subject Name: PROGRAMMING IN C LAB   **No. of Hour per week: 3**

Subject Code: FPCA13   **Credit: 2**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
I (Regulation 2022-2023)	Programming in C Lab	2	CO1-Students can develop own individual programs. CO2-Students ability to work with textual information, Characters and Strings. CO3-Students to develop logic which will help to create programs, application in c. CO4-Students are control the sequence of the programs and give logical Outputs. CO5 – Students will be able to learn and debug a given program and execute the c program

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	S	S	S
CO2	S	S	M	S	S	S
CO3	S	M	M	S	S	M
CO4	S	M	M	S	M	M
CO5	S	M	M	S	S	S

Subject Name: MATHEMATICALFOUNDATIONS–1   **No. of Hour per week: 7**

Subject Code: FAMA15B   **Credit: 3**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
I (Regulation 2022-2023)	Mathematical Foundations – I	3	CO1 –Students can ability to apply mathematical logic to solve problems. CO2 – Students can realize the sets, relations, functions. CO3-Students can explain the discrete structures. CO4 –Students can use logical notation to define and reason about fundamental mathematical concepts such as sets, relations, and functions. CO5- Students can to solve complex problems by critical understanding, analysis and synthesis.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	M	M	S	S
CO2	S	S	M	M	S	S
CO3	S	M	M	S	S	S
CO4	S	S	M	S	S	M
CO5	S	S	S	S	M	M

Subject Name: PROFESSIONAL ENGLISH-1 No. of Hour per week: 6

Subject Code: FPE10C **Credit: 3**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
I (Regulation 2022-2023)	Professional English I	3	CO1 – Students can explain the basic objective of communication skills i.e. Reading, Writing, Listening and Speaking. CO2 – Students can analyze construct the strong professional vocabulary for its application through numerous modes as Comprehension, reading, writing and speaking etc. CO3 – Students ca n identify to use it at their work place for writing purposes such as Presentation, administrative communication and use it in various areas such as document, report, research paper writing. CO4 –Students will apply it at their work place for writing purposes such as Presentation/administrative communication. CO5 – Students can able to oral presentation purposes and to apply techniques for developing inter-personal communication skills.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	S	M	M	S
CO2	M	S	S	S	L	M
CO3	M	S	S	M	L	M
CO4	M	S	S	M	L	L
CO5	M	S	S	L	S	S

Subject Name: ENVIRONMENTAL STUDIES   **No. of Hour per week: 2**

Subject Code: FES10   **Credit: 2**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
I (Regulation 2022-2023)	Environmental studies	2	CO1 – Students can able analyze Eco system in their environment. CO2 –Students can Recognize the importance of natural resources. CO3 – Students can adopting sustainability as practice in life, society and industry. CO4 – Students can use scientific reasoning to understand environment problems.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	S	M	M	S
CO2	S	S	S	S	S	M
CO3	S	S	S	S	M	S
CO4	M	S	S	S	S	S

SEMESTER – II

Subject Name: COMMUNICATIVE ENGLISH-I   **No. of Hour per week: 6**

Subject Code: FLE20   **Credit: 4**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
II (Regulation 2022-2023)	Communicative English II	4	CO1 - Students will read university texts and expand their vocabulary. CO2 - Students will read for intensive information retrieval and interpretation required by university studies. CO3 - Students will develop abilities as critical thinkers, readers and writers. CO4 - Students will attain and enhance competence in the four modes of literacy: writing, speaking, reading & listening. CO5 - Students will write 3 summaries in which they will communicate appropriately, accurately and effectively what has been read. CO6 - Students will achieve these outcomes through the development of the following skills: focused reading skills work and exams; discussions of longer articles; and summary writing including the drafting process.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	M	S	S
CO2	M	S	S	S	S	M
CO3	S	S	M	S	S	S
CO4	S	S	S	S	M	S
CO5	M	S	S	S	S	M
CO6	S	S	S	S	S	S

Subject Name: C++ & DATA STRUCTURE   **No. of Hour per week: 5**

Subject Code: FCA21   **Credit: 4**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
II (Regulation 2022-2023)	C++ & Data Structure	4	CO1 – The students can able to develop the concepts of object oriented programming and constructor and destructor. CO2 – The students can able to illustrate the concepts of inheritance and apply it for real time problems. CO3 – The students can to analyze the concepts of Stacks and Queue using array and pointers. CO4 – The students can to describe, implement and recognize data structures including stacks, queues, linked lists, Binary trees traversal and graphs. CO5 – The students can obtain the knowledge of Recursion, Binary Search. CO6 – The students can able to understand the concepts of Sorting and Searching Algorithms.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	S	S	S	M
CO2	M	M	M	S	S	M
CO3	S	M	S	S	M	S
CO4	M	S	M	S	M	S
CO5	S	S	S	M	S	S
CO6	S	M	M	S	M	S

Subject Name: C++ and Data Structures Lab   **No. of Hour per week: 2**

Subject Code: FPCA23   **Credit: 2**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
II (Regulation 2022-2023)	C++ and Data Structures Lab	2	CO1 – The student's ability to Creating and Deleting the Objects with the concepts of Constructors and Destructors. CO2 – The students can able to implement the Polymorphism concepts and Operator Overloading. CO3 – The students can ability to implement basic Data Structures such as Arrays, Linked Lists, Stacks, Queues, Doubly Linked List and Infix to Postfix Conversion. CO4 – The students can able to apply Algorithm for solving problems like Sorting and Searching. CO5 – Students will be able to learn and debug a given program and execute the c ++ and Data Structures program

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	S	M	M
CO2	S	M	M	M	S	S
CO3	S	M	M	M	M	S
CO4	S	M	M	S	M	S
CO5	S	S	S	M	M	S

Subject Name: **Value Education**   **No. of Hour per week: 2**

Subject Code: FGA20   **Credit: 2**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
II (Regulation 2022-2023)	Value Education	2	CO1 – To realize the importance of value based living. CO2 – To enable the students to understand the purpose of their life. CO3 – To enable the Students to gain the leadership qualities. CO4 – To emerge the Students to become responsible citizens. CO5 – The Students will become value based professionals.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	M	M	S	S
CO2	S	M	M	M	S	S
CO3	M	M	M	L	S	S
CO4	S	S	S	S	S	M
CO5	S	S	S	S	S	S

Subject Name: Soft skill   **No. of Hour per week: 2**

Subject Code: FSS20   **Credit: 2**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
II (Regulation 2022-2023)	Soft skill	1	CO1 – The students can able to gain confidence in their speaking skills. CO2- The students will be to understand English language thoroughly.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	S	S	S
CO2	S	M	S	M	S	M

Subject Name: PROGRAMMING IN JAVA   No. of Hour per week: 3

Subject Code: CCA31   Credit: 4

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
III (Regulation 2020-2021)	Programming in Java	4	CO1 – Students can analyze the basic concepts object oriented language. CO2 – Students can able to illustrate writing programs skills in using multithreading. CO3 – Students can identify the user interface design techniques. CO4 – Students can construct reusable programs using the concepts of inheritance, polymorphism, interfaces and packages. CO5 – Students can apply the concepts Exception handling to develop efficient and error free codes. CO6 – Students can create event driven GUI and web related applications which reflect the real word scenarios.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	M	M	M	S
CO2	S	S	M	M	M	S
CO3	S	M	M	M	M	S
CO4	S	M	M	M	M	S
CO5	S	S	M	M	M	S

Subject Name: **E-Commerce**   **No. of Hour per week: 4**

Subject Code: CCA32   **Credit: 4**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
III (Regulation 2020-2021)	E-Commerce	4	CO1 – Students can analyze the compare and contrast traditional commerce and electronic E-commerce. CO2 – Students can explain the major types of E-commerce. CO3 –Students can discuss the process of E-commerce framework. CO4 – Students can identify the security threats in the E-commerce environment. CO5 –Students can describe how procurement and supply chains relate to B2B. CO6-Students can be aware of the ethical, social and security issues of information systems.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	M	M	S	M
CO2	S	M	M	S	S	M
CO3	S	M	M	S	S	M
CO4	S	M	M	S	M	M
CO5	S	M	M	S	M	M
CO6	S	M	M	S	S	M

Subject Name: **Operations Research**   **No. of Hour per week: 5**

Subject Code: CCA33   **Credit: 4**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
III (Regulation 2020-2021)	Operations Research	4	CO1- The Student able to understand the concepts of optimization and to formulate and Solve Linear Programming problems CO2- The Student able to understand the concepts of Transportation problem and Assignment problem Co3- The Student able to understand the concepts of sequencing problem CO4- The Student able to understand the concepts of PERT-CPM and their applications in product planning control. CO5- The Student able to understand the concepts of Solve the Minimal Spanning Tree Problem, Shortest Route Problem, Maximal Flow Problem and Minimal Cost Capacitated Flow Problem

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	S	M	S	M
CO2	S	S	M	S	S	M
CO3	M	M	M	S	S	M
CO4	S	S	S	S	M	S
CO5	S	M	M	S	M	M

Subject Name: Web technology　　　　　　**No. of Hour per week: 3**

Subject Code: CSCA34　　　　　　　　**Credit: 2**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
III (Regulation 2020-2021)	Web technology		CO1-Students are able to develop a dynamic web page by the use of VB Script and Java Script. CO2-Students can able to write a server side Java application called JSP to catch from data send from client and store it on data base. C03-Students can able to understand the concepts of HTML. C04-Students are able to develop own web site using VB Script, Java Script.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	M	M	S	M
CO2	S	M	M	S	S	M
CO3	S	S	S	S	S	S
CO4	S	M	M	S	M	M
CO5	S	M	M	S	M	M

Subject Name: PROGRAMMING IN JAVA LAB   **No. of Hour per week: 3**

Subject Code: CPCA36   **Credit: 3**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
III (Regulation 2020-2021)	Java Programming Lab	3	CO1 - Students can able to apply basic concepts such as function Overloading, array and string manipulation in Java CO2 – students can able to utilize classes in the real time applications CO3-students can able to understand the types of inheritance CO4 –They can implement packages, manipulate threads and exception handling techniques CO5 – They can Develop Applet programs and manipulate the IO streams

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	S	S	M	S
CO2	S	S	S	S	S	M
CO3	S	S	S	M	S	S
CO4	S	M	S	S	M	M
CO5	S	S	M	M	M	S

Subject Name: Introduction to Information Technology No. of Hour per week: 2

Subject Code: CNCA35   **Credit: 2**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
III (Regulation 2020-2021)	Introduction to Information Technology	2	CO1 – students can aware the basic of computer and its evolution. CO2 – They can utilize office automation software Ms-Office C03 – Students can operate windows OS and its Features. CO4 – students can aware the basic idea of internet and management systems.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	S	S	M
CO2	S	S	S	M	S	S
CO3	S	S	S	S	M	S
CO4	S	S	S	S	S	S
CO5	S	S	S	S	S	S

SEMESTER-IV

Subject Name: Relational Database Management Systems   **No. of Hour per week: 5**

Subject Code: CCA41   **Credit: 4**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
IV (Regulation 2020-2021)	Relational Database Management Systems	4	CO1 - The students can able to understand DBMS architecture, physical and logical database designs, database modeling, relational, hierarchical and network models. CO2 - The students can able to apply Structured query language (SQL) for database definition and database manipulation. CO3 - The students can able to demonstrate of normalization theory and apply such knowledge to the normalization of a database. CO4 - The students can able to create database for real time application by their own. CO5- The students can able to understand the concept of File Organization. CO6 - The students can able to apply aggregate in their applications.

Course Mapping

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	S	M	M
CO2	S	S	M	M	M	S
CO3	S	S	S	S	M	M
CO4	S	M	M	M	S	S
CO5	S	S	M	M	M	M
CO6	S	S	M	S	M	M

Subject Name: Enterprise Resource Planning   **No. of Hour per week: 4**

Subject Code: CCA42   **Credit: 4**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
IV (Regulation 2020-2021)	Enterprise Resource Planning	4	CO1 – The students able to make basic use of Enterprise software, and its role in integrating business functions. CO2 – The students able to analyze the strategic options for ERP identification and adoption. CO3 – The students able to design the ERP implementation strategies. CO4 – The students can able to create reengineered business processes for successful ERP implementation. CO5- The students can able to improve ERP related technologies. CO6- The students can able to analyze success and failure of ERP factors.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	S	M	M
CO2	S	S	M	M	M	S
CO3	S	S	S	S	M	M
CO4	S	M	M	M	S	M
CO5	S	S	M	M	M	M

Subject Name: Wireless Data Communication   No. of Hour per week: 5

Subject Code: CCA43   Credit: 4

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
IV (Regulation 2020-2021)	Wireless Data Communication	4	CO1- The students can able to understand the concepts of basic OSI layers. CO2 - The students can able to understand the basic concepts of error detection and DLC. CO3 - The students can able to analyze the signals and transmission media. CO4 - The students can able to analyze the characterize of wireless transmission technologies. CO5 - The students can able to ability to analyze to improved data services in cellular communication. CO6 – The students can able to various TCP /IP protocols.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	S	M	M
CO2	S	S	M	S	M	S
CO3	S	M	M	M	M	S
CO4	S	M	S	M	S	S
CO5	S	M	M	M	M	S

Subject Name: RDBMS Lab　　　　　　　　　　**No. of Hour per week: 3**

Subject Code: CPCA46　　　　　　　　　　　**Credit: 3**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
IV (Regulation 2020-2021)	RDBMS Lab	3	CO1 – The students can able to implement Basic DDL, DML and DCL commands CO2 – The students can able to understand Data selection and operators used in queries and restrict data retrieval and control the display order CO3 – The students can able to implement sub queries and understand their purpose. CO4 – The students can able to implement Join multiple tables using different types of joins. CO5 – The students can able to develop PL/SQL Block for procedures, Functions, cursors and exception handling etc.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	S	M	M
CO2	S	S	M	S	M	S
CO3	S	M	M	M	M	S
CO4	S	M	S	M	S	S
CO5	S	M	M	M	M	S

Subject Name: Financial Accounting - II **No. of Hour per week: 7**

Subject Code: CACM 25C   **Credit: 6**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
IV (Regulation 2020-2021)	Financial Accounting - II	6	CO1 – The students can able to acquire the knowledge in accounting, system of maintenance of accounts, journals, ledger, bill of exchange, account current, average due date and bank reconciliation statement. CO2 – The students can able to know the features of single entry system, difference between single entry and double entry system, need for departmental accounts, basis for allocation of expenses, difference between wholesale profit and retail profit, different methods of depreciation, features of hire purchase and installments systems and difference between hire purchase and installment system. CO3 – The students can able to familiarizing the methods of preparation of single entry system of accounts, inter-department transfer at cost or selling price. Preparation of branch accounts, preparation of accounts using various methods of depreciation and calculation of interest under hire purchase and installment system of accounting. CO4 – The students can able to develop analytical skills in single entry system of accounts. Department trading and profit and loss account and balance sheets, stocks and debtors system and final accounts system and hire purchase trading account. CO5 –The students can able to evaluate the cost of department purchase consolidated final accounts and default and repossession of goods under hire purchase system. CO6 – To enrich the students gain practical exposure in operating a branch independently with the knowledge of branch and departmental accounts.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	S	M	M
CO2	S	S	S	M	M	M
CO3	S	M	M	S	M	S
CO4	S	M	S	M	M	M
CO5	S	M	M	M	M	S
CO6	S	M	MS	S	M	S

Subject Name: Internet of Things   **No. of Hour per week: 3**

Subject Code: CSCA44   **Credit: 3**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
IV (Regulation 2020-2021)	Internet of Things	3	CO1 - The students can able to analyze various protocols for Internet of Things. CO2 - The students can able to develop web services to access IoT devices. CO3 - The students can able to design a portable IoT using Rasperry Pi. CO4 - The students can analyze applications of IoT in real time situation. CO5 – The students can able to IoT device and connect to the cloud.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	M	S	M	M
CO2	S	M	M	S	M	S
CO3	S	S	S	S	M	S
CO4	S	S	M	S	S	M
CO5	S	S	S	S	S	M

Subject Name Internet Technology   **No. of Hour per week: 2**

Subject Code: CNCA45   **Credit: 2**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
IV (Regulation 2020-2021)	Internet Technology	2	CO1 - The students can able to know the history and Evolution of Internet. CO2 – The students can recognize the services of Internet. CO3 – The student can able to know about Web page design and Web publishing. CO4 – The student can utilize the functions of search engines, Email Concept. CO5 - The student acquire the knowledge Internet Security.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	S	S	S
CO2	S	S	M	M	M	S
CO3	S	M	M	S	S	M
CO4	S	S	M	S	S	S
CO5	S	S	M	M	M	S

SEMESTER-V

Subject Name : Mobile Application Development   **No. of Hour per week: 6**

Subject Code: CCA51   **Credit: 4**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
V (Regulation 2020-2021)	Mobile Application Development	4	CO1-Students can able to understand about the basic developments of android applications CO2. Students can able to understand the usage of the controls in android application. CO3.Students can able to understand the advanced controls that are used in android Applications. CO4. Students can able to understand how the alerts are worked in application. CO5. Students can able to understand the concept of connecting a database into the application.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	S	S	S
CO2	S	S	M	M	M	S
CO3	S	M	M	S	S	M
CO4	S	S	M	S	S	S
CO5	S	S	M	M	M	S

Subject Name: Operating System   **No. of Hour per week: 6**

Subject Code: CCA52   **Credit: 4**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
V (Regulation 2020-2021)	Operating System	4	CO1 - The students can able to understand DBMS architecture, physical and logical database designs, database modeling, relational, hierarchical and network models. CO2 - The students can able to apply Structured query language (SQL) for database definition and database manipulation. CO3 - The students can able to demonstrate of normalization theory and apply such knowledge to the normalization of a database. CO4 - The students can able to create database for real time application by their own. CO5- The students can able to understand the concept of File Organization. CO6 - The students can able to apply aggregate in their applications.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	M	S	S
CO2	S	M	M	M	S	M
CO3	S	M	M	S	M	S
CO4	S	M	M	S	M	S
CO5	S	S	M	M	M	M
CO6	S	M	M	M	S	M

Subject Name: Design and Analysis of Algorithms   **No. of Hour per week: 4**

Subject Code: CCA53   **Credit: 2**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
V (Regulation 2020-2021)	Design and Analysis of Algorithms	4	CO1 After studied unit-1, students can aware the basic of Algorithm ,performance analysis and randomized algorithm. CO2 After studied unit-2, Students can utilize Divide and conquer methods in our life.. CO3 After studied unit-3, Students can operate the Greedy methods Knapsack problem, Tree Vertex Splitting , for maximum incomes in Features. CO4 After studied unit-4, Students can find out the shortest paths using Dynamic programming. CO5 After studied unit-5, Students can search the benefits using Binary Trees,Graphs,8 Queens problem.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	M	S	S
CO2	S	M	S	M	S	M
CO3	S	S	M	S	S	S
CO4	S	M	M	S	M	S
CO5	S	S	M	M	S	M

Subject Name: Mobile ApplicationsDevelopment-Lab   **No. of Hour per week: 4**

Subject Code: CPCA56   **Credit: 3**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
V (Regulation 2020-2021)	Mobile Applications Development-Lab	3	CO1-Students can apply essential Android Programming concepts. CO2- Students can able to develop various Android applications related to layouts & rich uses interactive interfaces. Co3- Students they develop Android applications related to mobile related server-less database like SQLITE. CO4-Students can able to demonstrate their understanding of the fundamentals of Android Operating Systems. CO5-Students can ability to deploy software to mobile devices.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	S	M	M	S
CO2	M	S	M	S	S	M
CO3	M	S	S	M	S	M
CO4	M	S	S	M	S	S
CO5	M	S	S	S	S	S

Subject Name: Operating System-Lab   **No. of Hour per week: 4**

Subject Code: CPCA57   **Credit: 3**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
V (Regulation 2020-2021)	Operating System-Lab	3	CO1 – The students can know how data is transmitted and checking of errors. CO2 – Students can develop program for FIFO, LRU Optimal page replacement algorithms. CO3 – The Students can demonstrate the various operation of file system. CO4-Students can apply the scheduling algorithms for the given problem

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	M	M	M
CO2	S	S	M	S	M	S
CO3	S	S	M	M	M	M
CO4	S	S	M	M	M	S
CO5	S	S	M	M	M	M

Subject Name: Data Mining   **No. of Hour per week: 3**

Subject Code: CECA54A   **Credit: 3**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
V (Regulation 2020-2021)	A.Data Mining	3	CO1 – provide the foundation knowledge in multi dimensional data model. CO2 – classify types of meta data. CO3 - Remove redundancy and incomplete data from the dataset using data preprocessing methods. CO4 – Students can explain the concept of cluster analysis. CO5 – To Develop a data mining application for data analysis of the techniques.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	S	M	M
CO2	S	M	M	S	M	S
CO3	S	M	S	S	S	M
CO4	S	S	S	S	M	M
CO5	S	M	M	S	M	M

Subject Name: Software Engineering

No. of Hour per week: 3

Subject Code: : CSCA55

Credit: 2

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
V (Regulation 2020-2021)	Software Engineering	2	CO1- Students can able to decompose the given project in various phases of a lifecycle. CO2- Students can able to choose appropriate process model depending on the user requirements. CO3-Students can able perform various life cycle activities like Analysis, Design, Implementation, Testing and Maintenance. CO4 -Students can able to know various processes used in all the phases of the product. CO5-Students can apply the knowledge, techniques, and skills in the development of a software product

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	M	S	M	M
CO2	S	S	S	M	M	S
CO3	S	M	M	S	M	M
CO4	S	S	M	M	S	S
CO5	S	M	M	S	M	M

Subject Name: Open Source Software   No. of Hour per week: 4

Subject Code: CCA61   Credit: 4

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
VI (Regulation 2020-2021)	Open Source Software	4	CO1 - The students can able to describe Introduction to Open Source Software, advantages, needs and examples of open source software, Hyper Text Markup Language, Lists, Tables, and Frames. CO2 - The students can able to describe Cascade Style Sheet, style sheet basics, style sheet properties. CO3 - The students can able to describe basis for open source operating system CO4 - The students can able to describe the JavaScript syntax, data types, variables, arrays, functions, control statements, objects. CO5 - The students can able to create simple database using DDL, DML commands. CO6 – The students can able to write PHP programs..

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	S	M	M
CO2	S	S	S	M	S	M
CO3	S	M	M	S	M	S
CO4	M	S	S	M	S	S
CO5	S	M	S	S	S	M
CO6	M	S	S	M	S	S

Subject Name: Python programming **No. of Hour per week: 4**

Subject Code: CCA62 **Credit: 4**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
VI (Regulation 2020-2021)	Python programming	4	CO1-Thestudent will be able to write simple Python programs gives basic knowledge. CO2-The student will be able to understand control structures. CO3-The student will be able to create functions. CO4The student will be able to arrange elements through sorting. CO5-The student will be able to handle exception.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	M	S	M	M
CO2	S	S	S	M	M	M
CO3	S	M	M	S	M	S
CO4	M	S	M	M	S	S
CO5	S	M	M	M	S	M

Subject Name: Python programming Lab   **No. of Hour per week: 4**

Subject Code: CPCA66   **Credit: 2**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
VI (Regulation 2020-2021)	Python programming Lab	2	CO1. The student will be able to write a program using operators. CO2.The student will be able to develop a program using loops. CO3.The student will be able to implement program using Arrays. CO4.The student will be able to implement the concept of String functions. CO5.The student will be able to build application with basic expressions.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	M	S	S
CO2	S	M	M	M	S	M
CO3	S	M	M	S	M	S
CO4	S	M	M	S	M	S
CO5	S	S	M	M	M	M

Subject Name: Open Source Programming - Lab   **No. of Hour per week: 4**

Subject Code: CPCA67   **Credit: 2**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
VI (Regulation 2020-2021)	Open Source Programming - Lab	2	CO1.The students can able to know features of OSS over Commercial s/w CO2. The students can able to develop simple shell programs using simple commands CO3.The students can able to apply the DDL and DML commands for their simple Applications with MySQL as backend. CO4. The students can able to classify the usage of different operators and functions in PHP. CO5. The students can implement the web pages for manipulating files

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	S	S	S
CO2	S	S	S	S	S	S
CO3	S	M	M	S	M	M
CO4	S	S	M	S	M	M
CO5	S	S	M	M	M	S

Subject Name: 2. Cryptography   **No. of Hour per week: 3**

Subject Code: CECA63B   **Credit: 3**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
VI (Regulation 2020-2021)	2. Cryptography	3	CO1. The student will be able to know the security attack sand services. CO2.The student will be able to understand the concept of Encryption Standards. CO3.The student will be able to understand public key cryptographic algorithms. CO 4.The student will be able to learn the concept of hash functions. CO5.The student will be able to understand the Email security.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	S	M	M	S
CO2	M	S	M	S	S	M
CO3	M	S	S	M	S	M
CO4	M	S	S	M	S	S
CO5	M	S	S	S	S	S

Subject Name: Mobile Computing No. of Hour per week: 3

Subject Code: CECA64C   **Credit: 3**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
VI (Regulation 2020-2021)	Mobile Computing	3	CO1-Students can to understand the challenges of wireless communication and the solutions that is in use. CO2-Students can able to study about various types of wireless data networks, wireless protocols and wireless voice networks. CO3-Students can able to design and implement mobile applications. CO4- Students can able to comprehend wireless LAN and cellular systems CO5-Students can able to learn development of applications in mobile computing platform

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	M	M	M
CO2	S	S	M	S	M	S
CO3	S	S	M	M	M	M
CO4	S	S	M	M	M	S
CO5	S	S	M	M	M	M

Subject Name: Object Oriented analysis and design   **No. of Hour per week: 3**

Subject Code: CSCA65   **Credit: 2**

Course Outcomes:

Semester	Course Name	Course Credit	Course Outcomes
VI (Regulation 2020-2021)	Object Oriented analysis and design	2	CO1 - The students can able to Learn the UML analysis and design diagrams. CO2 - The students can able to Apply appropriate object model and design patterns CO3 - The students can able to Create object code from design Patterns CO4 - The students can able to Learn to map design to code, Compare and contrast various testing techniques. . CO5- The students can able to Design and implement projects using OO concepts.

Course Mapping:

COs	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	S	M	M
CO2	S	M	M	S	M	S
CO3	S	M	S	S	S	M
CO4	S	S	S	S	M	M
CO5	S	M	M	S	M	M