

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)
An Institution of Priyadarshini Educational Academy)
NAAC ACCREDITED COLLEGE



Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

DEPARTMENT OF COMPUTER SCIENCE

The Department of Computer Science, Serves BSc Programme students to excel in the field of Computer Science and IT industry. The department offers Computer Science in three core combinations Mathematics - Physics - Computer Science, Mathematics – Statistics - Computer Science and Mathematics – Electronics - Computer Science of BSc. programme. It also provides B.Com Vocational as part of computer science.

Course outcomes of all the courses offered by Department of Computer Science(2015-16)

Code	Title of the paper	Outcomes
CS1-1(Th)	Computer Fundamentals and PhotoShop	CO1: Can Understand what is computer, characteristics and limitations of computer, Block diagram of computer, types of computers, uses of computers, computer generations. Number systems :binary, hexa and octal numbering system CO2: Understandthe Input and output devices, Types of Softwares, Different types of memories and storage devices, And basics of windows CO3: Getting started with photoshop, creating and saving a document in photoshop, page layout and back grounds, and different tools in photoshop. CO4: Can learn to working with images like image editing, color modes and adjustments , Zooming & Panning an Image, Rulers, Guides & Grids- Cropping image, image backgrounds ,making selections
CS1-1 (Practicals)	Photoshop Lab	CO5: Can understand Layers and Filters, - Editing the photo shoot, how to create adds, artistic effects, blur filter,t filters noise, light effects,difference clouds,sharpen

Shramikanagar, Chinagantyada, Gajuwaka, Visakhapatnam – 530 026.
Ph:0891-2512891,2516124,986661133,34,35,36,Fax: 0891-2519870
E-mail:mvrcolleges@yahoo.com,Website:www.mvrededucation.com

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)
An Institution of Priyadarshini Educational Academy)
NAAC ACCREDITED COLLEGE

Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

CS1-2 (Th.)	Programming in C	<p>filters,printing.</p> <p>CO1:Can learn how to operate computer and can learn basics of windows practically</p> <p>CO2:Can learn creating and saving a document in photoshop</p> <p>CO3:Can learn how to set the page layouts and backgrounds</p> <p>CO4: Can learn how to use different tools in phtoshop for editing an image</p> <p>CO5:Can learn working with images like editing color modes and adjustments</p> <p>CO6:Can learn zooming & panning an image, Rulers, Guides & Grids</p> <p>CO7: Can learn cropping, image backgrounds and selections</p> <p>CO8:Can prepare adds, posters, filtering noise, light effects and printing.</p> <p>CO1: Analyse a given problem and develop an algorithm to solve the problem.</p> <p>CO2: Understand the structure, syntax and semantics of C programming.</p> <p>CO3: Learn the concepts of basic data types, derived data types and user defined data types.</p> <p>CO4: Choose different control structures like decision control, loop control to solve the problem.</p> <p>CO5: Study the modular programming concepts and storage classes.</p> <p>CO6: learn the concept of Programs involving the use of arrays.</p> <p>CO7: Understand the dynamics of memory by the use of pointers.</p> <p>CO8: Understand how to perform various FILE I/O operations.</p>
-------------	------------------	---

2

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE



Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

CS1-2 (Practicals.)	C Programming Lab	CO1: understand the execution of programs written in C language. CO2: Acquire knowledge about the basic concept of writing a program. CO3: Explain the role of constants, variables, identifiers, operators and other building blocks of C Language. CO4: Use the conditional expressions and looping statements to solve problems associated with conditions and repetitions. CO5: Demonstrate the role of Functions involving the
		idea of modularity. CO6: Understand the concept of Array and pointers dealing with memory management. CO7: Write programs that perform operations using derived data types.

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE



Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

CS2-2 (Practicals)	Data Structures Lab	CO1: Implement different sorting and searching algorithms. CO2: Implement the stack, Queue and their applications. CO3: Implement various types of linked lists and their applications. CO4: Perform basic operations on trees and graphs and determine minimum spanning tree.
-----------------------	------------------------	---

CS3-1(1) (Th)	DATABASE MANAGEMENT SYSTEMS	CO1: Differentiate database systems from file systems by enumerating the features provided by database systems and describe each in both function and benefit. CO2: Understand the basic principles of database management systems. CO3: Demonstrate an understanding of the relational data model. CO4: Design Entity-Relationship diagrams to represent simple database application scenarios. CO5: Develop relational tables and sql queries for a given context in relational database. CO6: Draw various data models for Data Base and Write queries mathematically. CO7: Apply normalization techniques to a given database application. CO8: Describe transaction processing and concurrency control. CO9: Understand the basic principles of Distributed database management systems.
------------------	-----------------------------------	---

Shramikanagar, Chinagantyada, Gajuwaka, Visakhapatnam – 530 026.
Ph:0891-2512891,2516124,986661133,34,35,36,Fax: 0891-2519870
E-mail:mvrcolleges@yahoo.com,Website:www.mvreducation.com

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE

Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

CS3-1 (Practicals)	DBMS Lab	CO1: Design and implement a database for a given problem-domain CO2: Formulate query for a database using DDL/DML commands CO3: Apply integrity constraints on a database CO4: Develop programs including procedures, stored functions, cursors and triggers for data manipulation.
CS3-1(2)(Th)	Software Engineering	CO1: Understand the core principles of software engineering CO2: Apply appropriate software process model for a given scenario. CO3: Analyze the requirements for a given problem CO4: Apply the design paradigms to design simple software system CO5: Identify the fundamental principle of test-driven development methods CO6: Interpret the risk strategies to assure the quality of Software
CS3-1(2) (Practicals)	Software Engineering Lab	CO1:Understand the SDLC of Software development CO2: Apply appropriate software process model for a given example CO3: Identifying the requirements for a given problem CO4:Preparing a Time line chart for a given example CO5:Preparing Risk table for a given example CO6:Applying the different testing techniques on a solution

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)
An Institution of Priyadarshini Educational Academy)
NAAC ACCREDITED COLLEGE



Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

CS3-2(1) (Th)	Web Technologies	CO1: Introduction to HTML ,CreatingHyperlinks, Formatting, Tables, Images CO2: Creating cascading style sheets, formatting blocks of information and Layers CO3: Can learn Java scripting language with all its features, exception handling CO4: Can learn combining DHTML with Javascripting, applying validations and message confirmations, rollover buttons and moving images CO5: Defining data for web applications, creation of basic XML pages, Document object model, and web services
------------------	------------------	---

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE

Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

CS3-2(1) (Practical s)	Web Technologies	CO1: Design static webpages with html and css. CO2: Design Dynamic webpages with JavaScript. CO3: Develop interactive web pages with regular expressions, event handling. CO4: Create an online form by using field validations. CO5: Using web indexing, creating XML document
------------------------------	------------------	--

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE



Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

CS3-1 (Practicals)	DBMS Lab	CO1: Design and implement a database for a given problem-domain CO2: Formulate query for a database using DDL/DML commands CO3: Apply integrity constraints on a database CO4: Develop programs including procedures, stored functions, cursors and triggers for data manipulation.
CS3-1(2)(Th)	Software Engineering	CO1: Understand the core principles of software engineering CO2: Apply appropriate software process model for a given scenario. CO3: Analyze the requirements for a given problem CO4: Apply the design paradigms to design simple software system CO5: Identify the fundamental principle of test-driven development methods CO6: Interpret the risk strategies to assure the quality of Software
CS3-1(2) (Practicals)	Software Engineering Lab	CO1:Understand the SDLC of Software development CO2: Apply appropriate software process model for a given example CO3: Identifying the requirements for a given problem CO4:Preparing a Time line chart for a given example CO5:Preparing Risk table for a given example CO6:Applying the different testing techniques on a solution

Shramikanagar, Chinagantyada, Gajuwaka, Visakhapatnam – 530 026.

Ph:0891-2512891,2516124,986661133,34,35,36,Fax: 0891-2519870

E-mail:mvrcolleges@yahoo.com,Website:www.mvrededucation.com

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE

Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

CS3-2(1) (Th)	Web Technologies	<p>CO1:Introduction to HTML ,CreatingHyperlinks, Formatting, Tables, Images</p> <p>CO2: Creating cascading style sheets, formatting blocks of information and Layers</p> <p>CO3: Can learn Java scripting language with all its features, exception handling</p> <p>CO4:Can learn combining DHTML with Javascripting, applying validations and message confirmations, rollover buttons and moving images</p> <p>CO5:Defining data for web applications, creation of basic XML pages, Document object model, and web services</p>
------------------	------------------	---

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE



Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

CS3-2(1) (Practical s)	Web Technologies	CO1: Design static webpages with html and css. CO2: Design Dynamic webpages with JavaScript. CO3: Develop interactive web pages with regular expressions, event handling. CO4: Create an online form by using field validations. CO5: Using web indexing, creating XML document
------------------------------	------------------	---

CS3-2(1) (Th)	PHP & MYSQL,WORDPRESS	CO1: Can learn Installing and configuring MYSQL and Apache, Basics of Phpscripts, switching, looping and controlling statements and how to code a php application CO2:Can learn working with functions, scope of variables, working with objects and Arrays,Date & Time functions and formatting CO3:Creating forms, user inputs, combining HTML and PHP code, redirecting the users, sending mails, and file uploads, working with cookies and sessions, working with files and directories, Images. CO4:Introduction to MYSQL, interacting with databases to php, basic mysql commands, transitions and stored procedures CO5:Can learn Installing and configuring wordpress, working with posts, pages, widgets,
------------------	--------------------------	---

Shramikanagar, Chinagantyada, Gajuwaka, Visakhapatnam – 530 026.

Ph:0891-2512891,2516124,986661133,34,35,36,Fax: 0891-2519870

E-mail:mvrcolleges@yahoo.com,Website:www.mvreducation.com

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE

Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

		menus. Creating websites and blogs using wordpress
CS3-2(1) (Practicals)	PHP &MYSQL,WORDPRESS	CO1:Practicing creation of tables, insertion of data and retrieving required information by writing queries CO2: writing a php code to display the date in different formats, writing program to display data with associative arrays, and functions. CO3:Creating forms, inputting data with user like adding new rows, fetching rows and deleting rows CO4:Creation of websites and modification of data with Php and Mysql CO5:Creation of blogs and websites using Wordpress, working with posts, pages.
CS3-2(2) (Th)	Advanced Java script: JQUERY/AJAX/JSON/Angular JS	CO1:Undetstand basics of JQuery like strings, numbers, objects,Arrays,functions.Can apply JQuery selectors, DOM attributes and DOM traversing Methods CO2:Applying CSS methods, Content manipulating ,Jquery event handling, creating jQuery custom animations. CO3: Understanding jQuery UI, downloading and importing jQueru UI, add and remove class, applying validations, plig-ins, regular expressions CO4:Intoduction to AJAX, getting database connection using jQuery-AJAX, Inserting, updating ,deleting database data using jQuery-AJAX, Introduction to JSON, JSON arrays and objects CO5:Introduction to AngularJS, events,Animations, routing,directives.

Shramikanagar, Chinagantyada, Gajuwaka, Visakhapatnam – 530 026.

Ph:0891-2512891,2516124,986661133,34,35,36,Fax: 0891-2519870

E-mail:mvrcolleges@yahoo.com,Website:www.mvrededucation.com

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE



Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

CS3-2(2) (Practicals)	Advanced Java script: JQUERY/AJAX/JS ON/Angular JS	CO1:UsingjQuery find all text areas and makes a border, can add borders to paragraphs, insert DOM element after all paragraphs. CO2:Creation of population lists, searching, creation of accordions. CO3:Creation of buttons,setting images to buttons, enabling and disabling the buttons, hiding the labels CO4:Creation of jQueryDatepicker, specyng a text to display for the week of the year and formats of dates. CO5:Creation of dynamic website using javascript as case study
CS3-2(3)	Project work and viva voce	CO1: Can Able to work in teams to build software solutions including website design and development and database management by applying various technologies.

Shramikanagar, Chinagantyada, Gajuwaka, Visakhapatnam – 530 026.
Ph:0891-2512891,2516124,986661133,34,35,36,Fax: 0891-2519870
E-mail:mvrcolleges@yahoo.com, Website:www.mvreducation.com

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE

Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

Course outcomes of all the courses offered by Department of Computer Science(2020-21)

Code	Title of the paper	Outcomes
CS1-1(Th)	PROBLEM SOLVING IN C	CO1: Understand the evolution and functionality of a Digital Computer CO2: Apply logical skills to analyse a given problem CO3: Develop an algorithm for solving a given problem.. CO4: Understand 'C' language constructs like Iterative statements, Array processing, Pointers, etc. CO5: Apply 'C' language constructs to the algorithms to write a 'C' language program. CO6: learn the concept of Programs involving the use of arrays. CO7: Understand the dynamics of memory by the use of pointers. CO8: Understand how to perform various FILE I/O operations.
CS1-P (Practicals)	Problem solving in C Lab	CO1: understand the execution of programs written in C language. CO2: Acquire knowledge about the basic concept of writing a program. CO3: Explain the role of constants, variables, identifiers, operators and other building blocks of C Language. CO4: Use the conditional expressions and looping statements to solve problems associated with conditions and repetitions. CO5: Demonstrate the role of Functions involving the idea of modularity. CO6: Understand the concept of Array and pointers dealing with memory management. CO7: Write programs that perform operations using

Shramikanagar, Chinagantyada, Gajuwaka, Visakhapatnam – 530 026.

Ph:0891-2512891,2516124,986661133,34,35,36,Fax: 0891-2519870

E-mail:mvrcolleges@yahoo.com,Website:www.mvrededucation.com

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE



Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

		derived data types.
CS1-2(Th)	DATA STRUCTURES USING C	CO1: Understand available Data Structures for data storage and processing. CO2: Comprehend Data Structure and their real-time applications - Stack, Queue, Linked List, Trees and Graph CO3: Choose a suitable Data Structures for an application CO4: Develop ability to implement different Sorting and Search methods CO5: Have knowledge onData Structures basic operations like insert, delete, search,update and traversal

Shramikanagar, Chinagantyada, Gajuwaka, Visakhapatnam – 530 026.

Ph:0891-2512891,2516124,986661133,34,35,36,Fax: 0891-2519870

E-mail:mvrcolleges@yahoo.com, Website:www.mvreducation.com

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE

Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

CS2-P	DATA STRUCTURES USING C LAB	<p>CO6: Design and develop programs using various data structures</p> <p>CO7: Implement the applications of algorithms for sorting, pattern matching etc</p> <p>CO1: : Demonstrate familiarity with major algorithms and data structures</p> <p>CO2: Determine which algorithm or data structure to use in different scenarios and be familiar with writing recursive methods.</p> <p>CO3: Demonstrate understanding of the abstract properties of various data structures such as stacks, queues, lists, trees and graphs and Use various data structures effectively in application programs.</p> <p>CO4: Demonstrate understanding of various sorting algorithms, including bubble sort, insertion sort, selection sort, merge sort and quick sort.</p> <p>CO5: Understand the importance of different ordered and unordered searching algorithms.</p> <p>CO 6: Understand and apply fundamental algorithmic problems including Tree traversals, Graph traversals, and shortest paths.</p> <p>CO 7: Understand the concept of and B- Trees.</p>
CS3 -1	DATABASE MANAGEMENT SYSTEMS	<p>CO1: Gain knowledge of Database and DBMS.</p> <p>CO2: Understand the fundamental concepts of DBMS with special emphasis on relational data model.</p> <p>CO3: Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database</p> <p>CO4: Model database using ER Diagrams and design database schemas based on the model.</p> <p>CO5: Create a small database using SQL.</p> <p>CO6: Store, Retrieve data in database</p>
CS3-P	DATABASE MANAGEMENT	<p>CO1: Design and implement a database for a given problem-domain</p>

Shramikanagar, Chinagantyada, Gajuwaka, Visakhapatnam – 530 026.

Ph:0891-2512891,2516124,986661133,34,35,36,Fax: 0891-2519870

E-mail:mvrcolleges@yahoo.com,Website:www.mvrededucation.com

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE

Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

C4 (Th)	OBJECT ORIENTATED PROGRAMMING THROUGH JAVA	CO1: Understand the benefits of a well-structured program CO2: Understand different computer programming paradigms CO3. Understand underlying principles of Object-Oriented Programming in Java CO4: Develop problem-solving and programming skills using OOP concepts CO5: Develop the ability to solve real-world problems through software development in high-level programming language like Java CO6: Use members of classes found in the Java API. CO7: Employ various types of selection constructs in a Java program. CO8: Employ a hierarchy of Java classes to provide a solution to a given set of requirements. CO 9: Develop efficient Java applets and applications using OOP concept.
---------	---	---

Shramikanagar, Chinagantyada, Gajuwaka, Visakhapatnam – 530 026.
Ph:0891-2512891,2516124,986661133,34,35,36,Fax: 0891-2519870
E-mail:mvrcolleges@yahoo.com, Website:www.mvrededucation.com

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)

An Institution of Priyadarshini Educational Academy)

NAAC ACCREDITED COLLEGE



Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

CS4-P (Practicals)	OBJECT ORIENTATED PROGRAMMING THROUGH JAVA LAB	CO 1: Understand programming language concepts, particularly Java and object-oriented concepts. CO2: Write, debug, and document well-structured Java applications. CO 3: Implement Java classes from specifications and effectively create and use objects. CO 4: Understand the behaviour of primitive data types and arrays. CO5: Apply decision and iteration control structures to implement algorithms. CO6: Implement interfaces, inheritance, and polymorphism as programming techniques and apply exceptions handling.
CS-5 (Th)	OPERATING SYSTEMS	CO1: Know Computer system resources and the role of operating system in resource management with algorithms CO2: Understand Operating System Architectural design and its services CO3: Gain knowledge of various types of operating systems including Unix and Android. CO4:Understand various process management concepts including scheduling, synchronization, and deadlocks. CO5: Have a basic knowledge about multithreading. CO6: Comprehend different approaches for memory management. CO7: Understand and identify potential threats to operating systems and the security features design to guard against them. CO8: Specify objectives of modern operating systems and describe how operating systems have evolved over time.

Shramikanagar, Chinagantyada, Gajuwaka, Visakhapatnam – 530 026.

Ph:0891-2512891,2516124,986661133,34,35,36,Fax: 0891-2519870

E-mail:mvrcolleges@yahoo.com,Website:www.mvreducation.com

M.V.R. DEGREE COLLEGE

(Affiliated to Andhra University)
An Institution of Priyadarshini Educational Academy)
NAAC ACCREDITED COLLEGE

Dr.V.Rama Rao, M.A.,Ph.D.,
Secretary & Correspondent

Dr.A.Balakrishna,M.Sc.,Ph.D.,
Principal

CS5-P	OPERATING SYSTEMS LAB	CO9:Describe the functions of a contemporary operating system. CO1:Can understand how to implement CPU Scheduling algorithms CO2:Understand Sequential file allocation strategies. CO3:Understand Indexed file allocation strategies. CO4:Understand Linked file allocation strategies. CO5:Understand Memory management techniques. CO6:Can understand what are dead locks and avoidance of dead locks CO7:Understan paging, page replacement techniques.
-------	--------------------------	---

Approved
Smr
PRINCIPAL
M.V.R. DEGREE COLLEGE
Shramika Nagar, Gajuwaka,
VISAKHAPATNAM - 530 026

Shramikanagar, Chinagantyada, Gajuwaka, Visakhapatnam – 530 026.
Ph:0891-2512891,2516124,986661133,34,35,36,Fax: 0891-2519870
E-mail:mvrcolleges@yahoo.com,Website:www.mvreducation.com