

**NALLAMUTHU GOUNDER MAHALINGAM COLLEGE
(AUTONOMOUS)**

POLLACHI

P.G. DEPARTMENT OF COMPUTER APPLICATIONS

Batch No : 29

SYLLABUS FOR THE ACADEMIC YEAR

(2019 - 2021 Lateral)

NGM College

Vision

Our dream is to make the college an institution of excellence at the national level by imparting quality education of global standards to make students academically superior, socially committed, ethically strong, spiritually evolved and culturally rich citizens to contribute to the holistic development of the self and society.

Mission

Training students to become role models in academic arena by strengthening infrastructure, upgrading curriculum, developing faculty, augmenting extension services and imparting quality education through an enlightened management and committed faculty who ensure knowledge transfer, instill research aptitude and infuse ethical and cultural values to transform students into disciplined citizens in order to improve quality of life.

P.G.Department of Computer Applications

Vision

“Our dream is to make the college an institution of excellence at the national level by imparting quality education of global standards to make students academically superior, socially committed, ethically strong, spiritually evolved and culturally rich citizens to contribute to the holistic development of the self and society”.

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SCHEME OF EXAMINATION

(FOR THE CANDIDATES ADMITTED FROM THE ACADEMIC YEAR 2019
ONWARDS)

	SEMESTER-V						
Course Code	Course Title	Lecture+ tutorial/	Duration of Exam Hrs	Marks			Credit Points
				Internal	End of Semester	Total	
19PMC532	Unix Programming	4	3	25	75	100	4
19PMC533	Artificial Intelligence and Machine Learning	4	3	25	75	100	4
19PMC534	Web Programming	4	3	25	75	100	4
19PMC535	Elective – III Python Programming	4	3	25	75	100	4
19PMC536	Programming Lab– X Unix Programming Lab	4	3	40	60	100	2
19PMC537	Programming Lab – XI Web Programming Lab	4	3	40	60	100	2
19PMC538	Programming Lab – XII Python Programming	2	3	40	60	100	1
Semester Total				220	480	700	21

	SEMESTER-VI						
Course Code	Course Title	Lecture+ tutorial/	Duration of Exam Hrs	Marks			Credit Points
				Internal	End of Semester	Total	
19PMC639	Cloud Computing	4	3	25	75	100	4
19PMC640	Elective IV – Android Programming	4	3	25	75	100	4
19PMC641	Online Certification			100		100	1
19PMC642	Project and Viva Voce			40	160	200	9
Semester Total				90	310	400	18
Grand Total				1210	2890	4100	140

Credits

4 Theory Hours = 4 Credits

5/4 Lab Hours = 2 Credits

3/2 Lab Hours = 1 Credit

Bloom's Taxonomy Based Assessment Pattern

K1-Remember ;K2- Understanding ; K3- Apply ; K4-Analyze ; K5- Evaluate

1. Theory: 75 Marks

(i) TEST- I & II and ESE:

Knowledge Level	Section	Marks	Description	Total
K1	A(Answer all)	10x1=10	MCQ/Define	75
K2	B (Either or pattern)	5x5=25	Short Answers	
K3& K4	C(Answer 4 out of 6)	4x10=40	Descriptive/ Detailed	

2. Theory: 50 Marks

Knowledge Level	Section	Marks	Description	Total
K1	A(Answer all)	10x1=10	MCQ/Define	50
K2	B (Either or pattern)	5 x 3=15	Short Answers	
K3& K4	C(Answer 5 out of 7)	5 x 5 =25	Descriptive/ Detailed	

3. Practical Examinations:

Knowledge Level	Section	Marks	Total
K3	Practicals& Record work	60	100
K4		40	
K5			

Components of Continuous Assessment

Components		Calculation	CIA Total
Test 1	75	$\frac{75+75+25}{3}$	25
Test 2	75		
Assignment/Seminar	25		

Programme Outcomes

PO1.

To prepare students to face the industry/ academia/technical profession with confidence

PO2.

To provide students with solid foundation in mathematical and computing fundamentals and techniques required to solve related problems and also to pursue higher studies and research and to train students with good computing breadth so as to comprehend, analyze, design and create computing solutions for the real life problems

Programme Specific Outcomes

PSO1 Graduates will acquire knowledge of basic mathematics, computing fundamentals, programming concepts and other core computer subjects.

PSO2 Graduates will have an ability to identify, formulate and implement computing solutions.

PSO3 Graduates will have an ability to design and conduct experiments, analyze and interpret data.

PSO4 Graduates will be able to design a system, component or process as per needs and specification.

PSO5 Graduates will demonstrate effects of computing solutions on the society.

Semester V

Programme code:	MCA	Programme Title :	Master of Computer Applications	
Course Code:	19PMC532	Title	Batch :	2019
		Unix and shell programming	Semester	V
Hrs/Week:	4		Credits:	04

Course Objective

- To enable the students to understand the core principles UNIX technology.
- To create effective Shell programming and kernel programs based on operating system concepts of Unix
- To learn the system administration tasks of Unix

Course Outcomes (CO)

K1	CO1	To rember the basic set of commands and utilities in UNIX systems
K2	CO2	To understand UNIX library functions , communication facility and system calls
K3	CO3	To deploy shell programming inUNIX systems.
K4	CO4	To analyze various administrative task in Unix environment

Existing Syllabus

Unit-I

Introduction to UNIX: UNIX operating system- background- multiuser capability-multi tasking capability-features of Unix (Communication, Security, Pattern matching, Portability, Open systems, Programming facility, Tool gate, System calls and Library, User interface,Documentation, Online help).

UNIX Kernal: Kernal and Shell, Types of shell- File systems- Types of files, Structure of file working with file (touch, cat, cp, rm, md, ls, sort dwc commands)- working with directories (cd, pwd, mkdir, rmdir commands)- file and dir, permission, miscellaneous commands (log name, id, uname, ply, who, day)- filename substitutions (* and ?)- commands files, sleep and walk up.

Unit-II

File Systems: Boot block- super block- Inode table- data blocks- storage of files- disk related commands (df, du, ulimit)

UNIX Tools: General in UNIX (password, calendar, banner, dd, file compression)- Input and Output redirection and piping- redirection in UNIX, redirection standard output- redirection standard input- pipelines in UNIX- splitting with pipeline using the head and tail commands- Vi editor- modes of operation- commands used to handling the text- block commands- set commands- handling multiple file.

Unit-III

Communication and scheduling: The bulletin board- message of day- two way communication- message to users- mail facility- addressing all users- delaying shell script- calendar and batch commands- cron facility.

Filters and process: Simple awk filtering- formatting output- number processing- positional parameter and shell variables, nawk, getline statements- built in variables- arrays, functions- Interface with the shell.

SH Process: Parents and Children- Process status- System process- Multi jobs in background- Background process using kill, nice and time command.

Unit-IV

Shell Programming: Shell script- Shell variables- Shell keywords, User defined variables- Passing command line arguments- echo command- looping with for, if, exit, else, break and while statements- continue statement- case statement- using input to shell procedures- shell functions- input/output redirection meta character- conditional execution using AND and OR operation- debugging shell procedures- simple programs.

Unit-V

System Administration: Adding and removing users- daily administration- starting up, shutting down the system- disk management- formatting disk- making and mounting a file system- unmounting the file system- ensuring system security- file system administration- backups- important commands (tar, fack, lost, found, cron).

Books for Study:

1. Sumitabha Das,(2006) “*Unix Concepts and Applications*”,*Fourth Edition*,,McGraw Hill Publications
2. Yeswant Kanitkar , (2003), “*Unix and Shell programming*”, Second Edition, BPB Publication

Books for Reference:

1. Maruice J. Bach, Reprint (2001), “*The design of the UNIX operation system*”, 4th Indian reprint, Prentice Hall of India
2. W. Richard Stevens, (1990), “*Unix Network Programming*”, 2nd edition, Prentice Hall of India,.
3. Rebecca Thomas, Lawrence R. Rogers, Jean L. Yates, (1987), “*Advanced Programmers Guide to Unix System V*”, McGraw Hill International Editions.

Mapping

PSO CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	H	M	M	S
CO2	H	M	H	S	H
CO3	H	S	S	H	H
CO4	M	H	H	L	M

S- Strong; H-High; M-Medium; L-Low

Course Designed by	Verified by HOD	Checked by	Approved by
Name and Signature	Name and Signature	CDC	COE
Dr.M.Rajasenathipathi	Dr.M.Rajasenathipathi	Dr. M. Durairaju	Dr. R. Muthukumaran
Signature:	Signature:	Signature:	Signature:

Programme code:	MCA	Programme Title :	Master of Computer Applications	
Course Code:	19PMC533	Title	Batch :	2019
		Artificial Intelligence and Machine Learning	Semester	V
Hrs/Week:	4		Credits:	04

Course Objective

Introduction to AI Problems

Knowledge of Heuristic techniques

Representing Simple facts and learning.

Learning the concepts of AI and Machine Learning

Course Outcomes (CO)

K1	CO1	Understanding the AI Problems
K2	CO2	Get the knowledge of Heuristics Technique
K3	CO3	Representing Simple facts and learning.
K4	CO4	Learning the concepts of AI and Machine Learning

UNIT I

Introduction: AI Problems - Criteria for success. Problems, Problem Spaces, Search: State space search - Production Systems - Problem Characteristics –Production system characteristics - Issues in design of Search.

UNIT II

Heuristic Search techniques: Generate and Test - Hill Climbing- Best-First, Problem Reduction, Constraint Satisfaction, Means-end analysis.

UNIT III

Knowledge representation issues: Representations and mappings -Approaches to Knowledge representations -Issues in Knowledge representations - Frame Problem.

Using Predicate logic: Representing simple facts in logic - Representing Instance and Isa relationships - Computable functions and predicates - Resolution - Natural deduction.

UNIT IV

Understanding Machine Learning: Machine Learning – Defining Big Data – Big Data in context with Machine Learning – Need to understand and trust the data – Importance of the hybrid cloud – Leveraging the power of Machine Learning – Roles of statistics and data mining with machine learning – Putting machine learning in context – Approaches to machine learning

UNIT V

Looking inside machine learning : Impact of machine learning on Applications – Data Preparation – Machine Learning Cycle . Learning Machine Learning Skills – Using Machine Learning to Provide Solutions to Business Problems - Ten Predictions on the future of Machine Learning

TEXT BOOK

1. Elaine Rich and Kevin Knight," Artificial Intelligence", Tata McGraw Hill Publishers company Pvt Ltd, Third Edition..
2. Judith Hurwitz and Daniel Kirsch " Machine Learning ", IBM Limited Edition 2018

REFERENCE BOOKS

1. Tom M. Mitchell, “Machine Learning “,Tata McGraw Hill Publishers company Pvt Ltd,

Mapping

PSO CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	H	H	H	H	S
CO2	H	M	M	S	H
CO3	H	H	M	M	M
CO4	M	H	H	H	M

S-Strong; H-High; M-Medium; L-Low

Course Designed by	Verified by HoD	Checked by	Approved by
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Dr. E. Rama Devi	Dr. M. Rajasenathipathi	Dr. M. Durairaju	Dr. R. Muthukumaran

Signature:	Signature:	Signature:	Signature:
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Programme Code:	MCA	Programme Title :	Master of Computer Applications	
Course Code:	19PMC534	Title	Batch :	2019
		Web Programming	Semester	V
Hrs/Week:	4		Credits:	04

Course Objective

- To understand the basics of Information Security.
- To know the legal, ethical and professional issues in Information Security.
- To know the aspects of risk management.
- To become aware of various standards in this area.
- To know the technological aspects of Information Security

Course Outcomes (CO)

K1	CO1	To remember the basic structure of JavaScript and create dynamic WebPages
K2	CO2	To understand the dynamic WebPages validation
K3	CO3	To apply the WebPage design using various scripting language
K4	CO4	To analysis the design concept to various web site design development

Existing Syllabus

Unit-1

Java Script(JS): Introduction – Web pages- Database Connectivity- Client Side Java Script – Advantages of Java Script – Writing Java script into HTML – Basic Programming techniques-Data types & Literals - Functions - Operators Comparisons - Conditions -Switch - Loop :For -While - Breaks - Errors - Event Handling - Validation

JS Html DOM: DOM Introduction DOM HTML DOM CSS DOM Events DOM Nodes

JS Object: Number - String -Date - Array – Boolean- Math- - RegExp - Window - Screen – Location- History Navigator PopupAlert - Timing - Cookies - Libraries - JQuery - Prototype

Unit-2

VB Script: VBScript Basics- VB Variables Sub types and Constants- Arrays- VBScript operators-VBScript Procedures- Program control and Structures- Built in functions and statements, objects, using Cookies, frames and Animation with VB Script - Strings and Numbers-Message and Input boxes- Dates and Times-The Document Object Model – Event handlers

Unit-3

ASP: ASP Introduction- Syntax- Variables- Procedures - Forms - Cookies - Session - Application - Send Email - **Objects:** Response - request -Session Server - Error - file System - TextStream - Drive - File - Folder -Dictionary

ADO Components: AdRotator- Browser Cap -Content Linking - Content Rotator

Unit-4

Introducing XML: An Eagle's Eye View of XML -XML Applications- Your First XML Document- Structuring Documents- Attributes, Empty Tags, and XSL-Well-Formed XML Documents

Document Type Definitions: Document Type Definitions and Validity - Element Declarations- Attribute Declarations- Entity Declarations- Namespaces

Style Sheets: CSS Style Sheets-CSS Layouts- CSS Text Styles- XSL Transformations- XSL Formatting Objects

Unit-5

Introducing SOA: Fundamental SOA- Common Misperceptions about SOA- Common tangible benefits of SOA- Common pitfalls of adopting SOA. The Evolution of SOA:-from XML to Web services to SOA, The continuing evolution of SOA, The roots of SOA. Web Services and Primitive SOA: The Web services framework- Services, Service descriptions, messaging with SOAP.

Power point Presentations, Group discussions, Seminar ,Quiz, Assignment, Experience Discussion, Brain storming, Activity, Case study

Books for Study:

- Ivan Bayross(2009), “Web Enabled Commercial Application Development Using HTML,DHTML,Javascript,PERL,CGI” Edition IIBPB Publications.
- William-J-Orvis(1998), “Understanding VB Script-Web page Interactivity”, Galgotia Publications,
- H.M Deitel, P.J Deital, T.R Neito, T.M Lin, P Sadhu(2001) “XML – How to Program-Featuring Java2, Perl CGI and Active Server Pages”, Pearsons Education, 2nd Edition.
- Thomas Erl ,” Service-Oriented Architecture: Concepts, Technology & Design”, Pearson Education Pte Ltd 2008.

Books for Reference:

- Nicholas C. Zakas “Professional JavaScript for Web Developers “ 3rd Edition
- Cristopher J Goddard, Mark White “Mastering VB Script “— Galgotia Publications
- Elliotte Rusty Harold(2004), “XML 1.1 Bible”, 3rd Edition, John Wiley & Sons.

Mapping

PSO CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	M	H	M	H	S
CO2	H	M	H	M	H
CO3	H	L	S	S	L
CO4	M	H	H	L	H

S- Strong; H-High; M-Medium; L-Low

Course Designed by	Verified by HoD	Checked by	Approved by
Name and Signature	Name and Signature	CDC	COE
Dr.B.Azhagusundari	Dr.M.Rajasenathipathi	Dr. M. Durairaju	Dr. R. Muthukumaran
Signature:	Signature:	Signature:	Signature:

Programme code:	MCA	Programme Title :	Master of Computer Applications	
Course Code:	19PMC535	Title	Batch :	2019
		Elective III:Python programming	Semester	V
Hrs/Week:	4		Credits:	4

Course Objective

- To enable the students to understand the core principles of the Python Language.
- To use the tools to produce well designed programs in python.
- To create effective GUI applications.

Course Outcomes (CO)

K1	CO1	To remember the principles of structured programming Recognize and construct common programming idioms: variables, loop, branch, subroutine, and input/output.
K2	CO2	To understand the common programming idioms: variables, loop, branch, subroutine, and input/output
K3	CO3	To deploy the concepts of lists, tuples, dictionaries, standard libraries, modular programming and the design of user interfaces
K4	CO4	To figure out ability to analyze and solve the problems using advanced facilities of the Python language

Syllabus

Unit – I	introduction: Introduction to Python- an interpreted high level language- interactive mode and script mode. Variables- Expressions and Statements: Values- Variables and keywords; Operators and Operands in Python: (Arithmetic - relational and logical operators)- operator precedence- Expressions and Statements(Assignment statement); Taking input (using rawinput() and input()) and displaying output(print statement);Putting Comments.	12 Hours
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Unit II	Built in Functions: Importing Modules (entire module or selected objects) – invoking built- in functions - functions from math module (ceil, floor, fabs, exp, log, log10, pow, sqrt, cos, sin, tan, degrees, radians) - using random() and randint() functions of random module to generate random numbers- composition. Defining functions- invoking functions- passing parameters (default parameter values- keyword arguments).	10 Hours
Unit III	Variables: Scope of variables- void functions and functions returning values- flow of execution Conditional constructs and looping: if.. else statement -While- For (range function)- break- continue- - pass- Nested loops- use of compound expression in conditional constructs. Strings: Creating- initializing and accessing the elements- String operators: +, *, in, not in, range slice[n:m] Comparing strings using relational operators. String functions & methods: len- capitalize- find- isalnum- isalpha- isdigit- lower- islower- isupper- upper-lstrip-rstrip- isspace- istitle- partition- replace- join- split- count- decode- encode-swapcase- PatternMatching.	10 Hours
UNIT IV	List functions & methods: Concept of mutable lists- creating- initializing and accessing the elements- traversing- appending- updating and deleting elements - List operations (joining- list slices)- len- insert- append- extend- sort- remove- reverse- pop. Dictionaries: Concept of key-value pair- creating- initializing and accessing the elements in a dictionary- traversing- appending- updating and deleting elements. Dictionary functions & Methods: cmp- len- clear()- get()- has_key()- items()- keys()- update()- values(). Tuples: Immutable concept - creating - intialising and accessing the elements in a tuple. Tuple functions: cmp()- len()- max()- min()- tuple().	10 Hours
UNIT-V	Modules: Modules-Standard Modules – sys- time- dir functions. Exceptions- Errors- Run Time Errors- The Exception Model-Exception Hierarchy- Handling Multiple Exceptions- raise - assert- Writing Your Own Exception Classes. GUI: Introduction- Components and Events- An Example GUI- The root Component- Adding a Button- Entry Widgets- Text Widgets- Checkbuttons- Radiobuttons- Listboxes- Frames- Menus- Binding Events to Widgets.	10 Hours

Power point Presentations, Group discussions, Seminar ,Quiz, Assignment, Experience Discussion, Brain storming, Activity, Case study

Books for Study:

1. Mark Lutz “Learning Python”, 5th Edition, 2013 (UNIT I -V).
2. Welsey J. Chun, “Core Python Programming”, Prentice Hall, 2001 (UNIT I -IV).

Books for Reference:

Guido van Rossum and Fred L. Drake- Jr, “An Introduction to Python “ Foundation, November 2006.

Mapping

PSO CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	H	S	M	H	S
CO2	H	M	H	S	H
CO3	M	S	S	M	M
CO4	M	H	H	L	H

S-Strong; H-High; M-Medium; L-Low

Course Designed by	Verified by HoD	Checked by	Approved by
Name and Signature	Name and Signature	CDC	COE
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Signature:	Signature:	Signature:	Signature:

Programme code:	MCA	Programme Title :	Master of Computer Applications	
Course Code:	19PMC536	Title	Batch :	2019
		Programming Lab -X	Semester	V
Hrs/Week:	4	Unix Programming Lab	Credits:	02

Course Objective

- To familiarize students with the Linux environment
- To learn the fundamentals of shell scripting/programming
- To familiarize students with basic linux administration

Course Outcomes (CO)

K1	CO1	To understand core principles UNIX technology.
K2	CO2	To understand UNIX library functions , communication facility and system calls
K3	CO3	To deploy shell programming in UNIX systems
K4	CO4	To analyze various administrative task in Unix environment s

Program -1	File Related commands
Program -2	Directory related commands
Program -3	Shortest Job First algorithm
Program -4	Round Robin scheduling algorithm
Program -5	FIFO Algorithm
Program -6	Dead Lock detection algorithm
Program -7	Paging
Program -8	Segmentation
Program -9	DOS Commands
Program -10	Command Line Arguments

Mapping

PSO CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	M	H	S
CO2	H	M	H	L	H
CO3	L	L	L	M	L
CO4	M	L	H	S	H

S- Strong; H-High; M-Medium; L-Low

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Programme code:	MCA	Programme Title :	Master of Computer Applications	
Course Code:	19PMC537	Title	Batch :	2019
		Programming Lab –XI – Web Programming Lab	Semester	V
Hrs/Week:	4		Credits:	2

Course Objective

- To understand the practical knowledge of .scripting language
- To provide an opportunity to practice various Scripts like HTML, XML and JavaScript. To design the Web application using CSS and Built in functions.
- To create simple web applications by using xml concepts

Course Outcomes (CO)

Course Outcomes (CO)(for Practicals Only)

K3	CO1	To remember and recollect the concept of scripting language
K4	CO2	To get the idea of scripting syntax and its structure
K5	CO3	To validate the projects using scripting language

III Semester	Programming Lab –XI –Web Programming Lab
Program -1	Create a JS code block using arrays to generate the current date in words
Program -2	Create a JS code block which checks the contents entered in a forms text element
Program -3	Create a JS code block that validate username and password
Program -4	Create a web page using two image files switch between one another at the mouse pointer moves over the images
Program -5	Create a web page which accept the user information and commands on the web site to check if all the text fields have been entered with data else display an alert
Program -6	Write text using VBScript
Program -7	Write html using VBScript
Program -8	Create an Array Using VBScript

Program -9	Create a Procedure using VBScript
Program -10	Write a program using VBScript built in functions
Program -11	Design the XML elements to hold membership information for a computer club
Program -12	XML document to hold the elements for 5 students
Program -13	Create a Link to a CSS to display student information
Program -14	Create a Cookie program using ASP
Program -15	Create a session object using ASP

Mapping

PSO CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	L	M	H	M	M
CO2	H	S	S	H	L
CO3	M	S	M	M	S
CO4	L	S	H	M	M

S- Strong; H-High; M-Medium; L-Low

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Name and Signature	Name and Signature	CDC	COE
Dr.B.Azhagusundari	Dr.M.Rajasenathipathi	Dr. M. Durairaju	Dr. R. Muthukumaran
Signature:	Signature:	Signature:	Signature:

Programme code:	MCA	Programme Title :	Master of Computer Applications	
Course Code:	19PMC538	Title	Batch :	2019
		Programming Lab –XII Python Programming	Semester	V
Hrs/Week:	4		Credits:	1

Course Objective

To give a basic introduction to object-oriented and procedural programming, using Python

Course Outcomes (CO)

K3	CO1	To remember the principles of structured programming Recognize and construct common programming idioms: variables, loop, branch, subroutine, and input/output.
K4	CO2	To understand the common programming idioms: variables, loop, branch, subroutine, and input/output
K5	CO3	To figure out ability to analyze and solve the problems using advanced facilities of the Python language

Existing Syllabus

Program – 1	Program to find the factorial of a number using recursion
Program – 2	Program to implement the control structures
Program – 3	Program to implement the list
Program – 4	Program to implement the operations and methods of the String
Program – 5	Program to implement the Tuples
Program – 6	Program to implement the Dictionaries
Program -7	Program to import and use the system libraries
Program-8	Program to implement the modules
Program-9	Program to implement the standard modules

Program-10	Program to implement Error handling
Program -11	Program to implement Exceptions
Program-12	Program to build the user interface
Program-13	Program to find Leap year or not
Program-14	Program to generate the Fibonacci series
Program-15	Program to emulate a calculator

Mapping

PSO CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	H	S	M	H	S
CO2	H	M	H	S	H
CO3	M	S	S	M	M
CO4	M	H	H	L	H

S-Strong; H-High; M-Medium; L-Low

Course Designed by	Verified by HoD	Checked by	Approved by
Name and Signature	Name and Signature	CDC	COE
Dr.S.Niraimathi	Dr. M.Rajasenathipathi	Dr. M. Durairaju	Dr. R. Muthukumaran
Signature:	Signature:	Signature:	Signature:

Semester VI

Programme code:	MCA	Programme Title :	Master of Computer Applications	
Course Code:	19PMC639	Title	Batch :	2019
		Elective III:Cloud Computing	Semester	VI
Hrs/Week:	4		Credits:	04

Course Objective

- Evaluate the deployment of web services from cloud architecture
- Critique the consistency of services deployed from a cloud architecture
- Critically analyze case studies to derive the best practice model to apply when developing and deploying cloud based applications

Course Outcomes (CO)

K1	CO1	To remember the powerful features of cloud
K2	CO2	To get the idea of using cloud apps
K3	CO3	To Compare and contrast the economic benefits delivered by various cloud models based on application requirements, economic constraints and business requirements.
K4	CO4	To Analyze the components of cloud computing showing how business agility in an organization can be created

Existing Syllabus

UNIT I

CLOUD COMPUTING FUNDAMENTALS - Cloud Computing definition, private, public and hybrid cloud. Cloud types; IaaS, PaaS, SaaS. Benefits and challenges of cloud computing, public vs private clouds, role of virtualization in enabling the cloud; Business Agility: Benefits and challenges to Cloud architecture. Application availability, performance, security and disaster recovery; next generation Cloud Applications.

CLOUD COMPUTING FUNDAMENTALS Cloud Computing definition, private, public and hybrid cloud. Cloud types; IaaS, PaaS, SaaS. Benefits and challenges of cloud computing, public vs private clouds, role of virtualization in enabling the cloud; Business Agility: Benefits and challenges to Cloud architecture. Application availability, performance, security and disaster recovery; next generation Cloud Applications.

UNIT II

CLOUD APPLICATIONS - Technologies and the processes required when deploying web services; Deploying a web service from inside and outside a cloud architecture, advantages and disadvantages

UNIT III

MANAGEMENT OF CLOUD SERVICES : Reliability, availability and security of services deployed from the cloud. Performance and scalability of services, tools and technologies used to manage cloud services deployment; Cloud Economics: Cloud Computing infrastructures available for implementing cloud based services. Economics of choosing a Cloud platform for an organization, based on application requirements, economic constraints and business needs (e.g Amazon, Microsoft and Google, Salesforce.com, Ubuntu and Redhat)

UNIT IV

APPLICATION DEVELOPMENT Service creation environments to develop cloud based applications. Development environments for service development; Amazon, Azure, Google App.

UNIT V

CLOUD IT MODEL Analysis of Case Studies when deciding to adopt cloud computing architecture. How to decide if the cloud is right for your requirements. Cloud based service, applications and development platform deployment so as to improve the total cost of ownership (TCO)

Text Book:

1. GautamShroff, “Enterprise Cloud Computing Technology Architecture Applications”, Cambridge University Press; 1 edition, [ISBN: 978-0521137355], 2010.

References

1. Toby Velte, Anthony Velte, Robert Elsenpeter, “Cloud Computing, A Practical Approach” McGraw-Hill Osborne Media; 1 edition [ISBN: 0071626948], 2009.

2. Dimitris N. Chorafas, “Cloud Computing Strategies” CRC Press; 1 edition [ISBN: 1439834539], 2010.

Mapping

PSO CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	M	H	M	H	S
CO2	H	M	M	M	H
CO3	H	M	M	H	M
CO4	M	H	H	H	M

S-Strong; H-High; M-Medium; L-Low

Course Designed by	Verified by HoD	Checked by	Approved by
Name and Signature	Name and Signature	CDC	COE
Dr. M. Rathamani	Dr. M. Rajasenathipathi	Dr. M. Durairaju	Dr. R. Muthukumaran
Signature:	Signature:	Signature:	Signature:

Programme code:	MCA	Programme Title :	Master of Computer Applications	
Course Code:	19PMC640	Title	Batch :	2019
		Elective IV:Android Programming	Semester	VI
Hrs/Week:	4		Credits:	04

Course Objective

- To understand an expert knowledge in basics of Android Applications.
To Create Activity, Intent modules using android
- To familiarize developing mini projects using android

Course Outcomes (CO)

K1	CO1	To remember the powerful features of android
K2	CO2	To get the idea of Designing and developing User Interfaces for the Android platform.
K3	CO3	To implement and configure Android app development tools
K4	CO4	To analyze user interfaces for the android platform

Existing Syllabus

Unit-1

What is Android-History of Embedded device programming-Open handset alliance and android-Introduction to android-Downloading and installing eclipse-Downloading and installing the android SDK.

Unit-2

Exploring the android SDK-What is the android SDK-Application life cycle-Application: hello world – Creating your first android Projects in Eclipse-Examine the Android-created files.

Unit-3

Using the command-Line tools and the Android Emulator: Creating a Shell activity using the windows CLI-Creating the hello world!, Activity in the windows CLI. Using intents and the phone dialer: What are intents-Using the Dialer-Placing a call from your activity.

Unit-4

Lists, Menus, and Other Views: Building the Activities-Using the menu, using the cell phone's GPS Functionality: using the android Location-Based API-Reading the GPS with the Android Location-Based API.

Unit-5

Application: Find a Friend: Creating a SQLite Database-Creating a Custom Content Provider-Creating the FindA Friend Activity-Running FindA Friend Activity, Android SDK Tool Reference-Emulator commands-Debug Bridge Commands.

Books for Study:

- J.F.DiMarzio, “Android A Programmer’s Guide” ,Tata McGraw-Hill, 2nd Edition publication,2010,New Delhi.

Books for Reference:

- Jonathan Stark ,” Building Android Apps With HTML, CSS, And Javascript “, O'Reilly Media, 1 Edition ,September 27, 2010.
- Bill Phillips, Brian Hardy, “Android Programming: The Big Nerd Ranch Guide “, Big Nerd Ranch Guides; 1 Edition ,April 9, 2013.

Mapping

PSO CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	M	S	L	M
CO2	M	L	H	M	L
CO3	L	M	M	S	M
CO4	M	M	H	H	S

S- Strong; H-High; M-Medium; L-Low

Course Designed by	Verified by HoD	Checked by	Approved by
Name and Signature	Name and Signature	CDC	COE
Dr.M.Rathamani	Dr.M.Rajasenathipathi	Dr. M. Durairaju	Dr. R. Muthukumaran
Signature:	Signature:	Signature:	Signature:

Programme code:	MCA	Programme Title :	Master of Computer Applications	
Course Code:	19PMC641	Title	Batch :	2019
		Online Certification	Semester	VI
Hrs/Week:		(Swayam/NPTEL/CISCO/SUN/Microsoft/RedHat etc..)	Credits:	1

Course Designed by	Verified by HoD	Checked by	Approved by
Name and Signature	Name and Signature	CDC	COE
Dr. M. Rathamani	Dr.M.Rajasenathipathi	Dr. M. Durairaju	Dr. R. Muthukumaran
Signature:	Signature:	Signature:	Signature:

Programme code:	MCA	Programme Title :	Master of Computer Applications	
Course Code:	19PMC642	Title	Batch :	2019
		Project and Viva voce	Semester	VI
Hrs/Week:			Credits:	9

Course Designed by	Verified by HoD	Checked by	Approved by
Name and Signature All staff	Name and Signature	CDC	COE
	Dr.M.Rajasenathipathi	Dr. M. Durairaju	Dr. R. Muthukumaran
Signature:	Signature:	Signature:	Signature: