

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)

**ERODE - 638 107** 

# PROGRAM NAME

Master of Computer Applications – (M.C.A.) 3 YRS / 2YRS



(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)

**ERODE - 638 107** 

2018-2019



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# SYLLABUS

Sem.	Course Code	CORE PAPER – XI OPEN SOURCE	Total Ma	Total Marks: 100		Credits
III	17PBHCT301	PROGRAMMING	CIA:25	ESE:75	4	4

- Understood the basic and advanced concepts of PHP
- Understood the programming and OOP's concepts of PERL
- Understood Usage of MySQL along with PHP and PERL

#### Course Outcomes:

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

- CO1 Apply the concepts of PHP
- CO2 Implement the OOP's concept in programming
- CO3 Implement Database connectivity with MySQL and XMŁ
- CO4 Develop the dynamic webpage
- CO5 Apply the fundamentals of PERL language

#### UNIT-I

Introducing PHP: History - Unique Features - Basic Development Concepts - Creating Your First PHP Script - Sample Applications. Using Variables and Operators: Storing Data in Variables - Understanding PHP's Data Types - Setting and Checking Variable Data Types - Using Constants - Manipulating Variable with Operators - Handling Form Input. Controlling Program Flow: Writing Simple Conditional Statements - Writing More Complex Conditional Statements - Repeating Actions with Loops - Working with String and Numeric Functions.

#### UNIT-II

Working with Arrays: Storing Data in Arrays - Processing Array with Loops and Iterators - Using Arrays with Forms - Working with Array Functions - Working with Date and Times. 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 - Performing Other File and Directory Operations.

#### UNIT-III

Working with Databases and SQL: Introducing Databases and SQL - Using PHP's MySQLi Extension - Adding or Modifying Data - Handling Errors - Using PHP's SQLite Extension - Using PHP's PDO Extension. Working with XML: Introducing XML - Using PHP's Simple XML Extension - Using PHP's DOM Extension.





#### UNIT-IV

Working with Cookies, Sessions and Headers: Working with Cookies - Working with Sessions - Using HTTP Headers. Handling Errors: Handling Script Errors - Using Exceptions - Logging Errors - Debugging Errors. Securing PHP: Sanitizing Input and Output - Securing Data - Validating User Input - Configuring PHP Security.

#### UNIT-V

PERL (Practical Extraction and Report Language): Introduction - Advantages and Working Environment of PERL - Variables - Strings - Statements - Subroutines - Files - Packages and Modules - Object Oriented PERL.

#### TEXTBOOK:

- 1. Vikram Vaswani, PHP A Beginner's Guide, McGraw Hill Education(India) Pvt., Ltd., Delhi, 2014. (UNIT-I to IV)
- 2. M.N. Rao, Fundamentals of Open Source Software, PHI Learning Pvt. Ltd., Delhi, 2015. (UNIT-V)

#### **BOOKS FOR REFERENCE:**

- 1. Steven Holzner, PHP: The Complete Reference, Tata McGraw Hill Publishing Company Limited, New Delhi, 2008.
- 2. Luke Welling, Laura Thomson, PHP and MySQL Web Development, 4th Edition, Pearson Education, 2009.
- 3. Steve Suehring, Tim Converse and Joyce Park, PHP6 and MySQL Bible, Wiley Publishing, 2009.
- 4. Steven Holzner. PERL Black Book, 2nd Edition, O'Reilly Media, Paraglyph Press, 2001.
- 5. R. Allen Wyke and Donald B Thomas, PERL A Beginner's Guide, McGraw Hill, 2001.

CCTION - B	SECTION - C
7 = 35 Marks	$3 \times 10 = 30 \text{ Marks}$
	(Answer any three Questions) One question from each unit
1	her or choice)

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Sem.	Course Code	CORE PAPER – XIII PROGRAMMING LOGIC AND	Total Marks: 100		Hours Per Week	Credits
Ш	17РВНСТ303	DESIGN	CIA:25	ESE:75	4	3

- Understood the primary structures of writing program
- Gained knowledge to design programs logics using the essential concepts

#### Course Outcomes:

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

- CO1 Remember and view the basics of program structure
- CO2 Represent programming logics using controls, loops and arrays
- CO3 Modularize the programs and handle files.
- CO4 Understand and define and OOP structure and GUI concepts
- CO5 Draw and generate UML diagrams and database tables

#### UNIT-I

An Overview of Computers and Programming: Understanding Computer Systems - Understanding Simple Program Logic - Understanding the Program Development Cycle - Using Pseudo code Statements and Flowchart Symbols - Using a Sentinel Value to End a Program - Understanding Programming and User Environments - Understanding the Evolution of Programming Models. Elements of High-Quality Programs: Declaring and Using Variables and Constants - Performing Arithmetic Operations - Understanding the Advantages of Modularization - Modularizing a Program - Creating Hierarchy Charts - Features of Good Program Design. Understanding Structure: The Disadvantages of Unstructured Spaghetti Code - Understanding the Three Basic Structures - Using a Priming Input to Structure a Program - Understanding the Reasons for Structure - Recognizing Structure - Structuring and Modularizing Unstructured Logic.

#### **UNIT-II**

Making Decisions: Boolean Expressions and the Selection Structure - Using Relational Comparison Operators - Understanding AND Logic - Understanding OR Logic - Understanding NOT Logic - Making Selections within Ranges - Understanding Precedence When Combining AND and OR Operators. Looping: Understanding the Advantages of Looping - Using a Loop Control Variable - Nested Loops - Avoiding Common Loop Mistakes - Using a for Loop - Common Loop Applications - Comparing Selections and Loops. Arrays: Storing Data in Arrays - How an Array Can Replace Nested Decisions - Using Constants with Arrays - Searching an Array for an Exact Match - Using Parallel Arrays - Searching an Array for a Range Match - Remaining within Array Bounds - Using a for Loop to Process an Array.



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#### UNIT-III

File Handling and Applications: Understanding Computer Files - Understanding the Data Hierarchy - Performing File Operations - Understanding Control Break Logic - Merging Sequential Files - Master and Transaction File Processing - Random Access Files. Advanced Modularization Techniques: The Parts of a Method - Using Methods with no Parameters - Creating Methods that Require Parameters - Creating Methods that Return a Value - Passing an Array to a Method - Overloading Methods - Using Predefined Methods - Method Design Issues: Implementation Hiding, Cohesion, and Coupling - Understanding Recursion.

#### UNIT-IV

Object-Oriented Programming: Principles of Object - Oriented Programming - Defining Classes and Creating Class Diagrams - Understanding Public and Private Access - Organizing Classes - Understanding Instance Methods - Understanding Static Methods - Using Objects. Event-Driven GUI Programming: Multithreading, and Animation - Understanding Event - Driven Programming - User-Initiated Actions and GUI Components - Designing Graphical User Interfaces - Developing an Event-Driven Application - Understanding Threads and Multithreading - Creating Animation.

#### UNIT-V

System Modeling with the UML: Understanding System Modeling -What is the UML - Using UML Use Case Diagrams - Using UML Class and Object Diagrams - Using Other UML Diagrams - Deciding When to Use the UML and Which UML-Diagrams to Use. Using Relational Databases: Understanding Relational Database Fundamentals - Creating Databases and Table Descriptions - Identifying Primary Keys - Understanding Database Structure Notation - Working with Records within Tables - Creating Queries - Understanding relationships Between Tables -Recognizing Poor Table Design - Understanding Anomalies, Normal Forms, and Normalization - Database Performance and Security Issues.

#### TEXTBOOK:

Joyce Farrell, Programming Logic and Design, Comprehensive Version, Cengage Learning, Eighth Edition, 2015.

#### BOOKS FOR REFERENCE:

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- 1. Tonny Gaddis, Programming Logic and Design, Pearson Education, Second Edition, 2011.
- 2. Jo Ann Smith, Microsoft Visual Basic Programs to accompany programming logic and design, Cengage Learning, Eighth Edition, 2015.
- 3. Anil Bikas Chaudhuri, The Art of Programming through Flowcharts and Algorithms, Firewall Media, India, 2005.

SECTION - A	SECTION - B	SECTION - C
10 × 1 = 10 Marks  Multiple Choice, Four options)  Two questions from each unit	5 × 7 = 35 Marks (Either or choice) when the Two questions from each unit	$3 \times 10 = 30$ Marks  (Answer any three Questions)  One question from each unit

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Sem.	Course Code	CORE PRACTICAL – V OPEN SOURCE	Total Marks: 100		Hours Per Week	Credits
Ш	17PBHCP306	PROGRAMMING LAB	CIA:40	ESE:60	5	4

- Practical knowledge in Query Processing using MySQL
- Practical knowledge in PHP, PERL and MySQL programming

#### Course Outcomes:

At the end of the course, the students will be able to:

- CO1 Implement the MySQL queries
- CO2 Develop forms using HTML and using PHP scripts to store and retrieve data
- CO3 Create a PHP Scripts for validation, file handling
- CO4 Implement session and cookies
- CO5 Develop an application using PERL and establish connectivity with a MySQL
- 1. Perform the following tasks using MySQL utility:
  - a) Create a database and Switch/set the default database.
  - b) Use the SHOW statement to find out the list of the databases and tables.
  - c) Execute the following MySQL commands
    - (i)  $ego(\G)$
    - (ii) delimiter (\d)
  - d) Create the Supplier table with field as id, name, status and city.
  - e) Modify the Supplier table to add a new column 'productid'.
  - f) Check the properties of table.
  - g) Insert 3 supplier details into supplier table.
  - h) Find the number of suppliers in the table.
  - i) Find the duplicate names using self join.
  - j) Find the duplicate names using grouping.
  - k) Delete a supplier by their id=1.



2. Create the Student Database in various programmes & books adopted for each

programme using MySQL with proper primary and foreign keys.

STUDENT	regno: string	name: string	major: string	bdate: date
PROGRAMME	coursecode :int -	coursename: string	dept: string	
ENROLL	regno: string	coursecode: int	sem: int	marks: int
TEXT	book-ISBN: int	book-title: string	publisher: string	author: string
BOOK_ADOPTION	coursecode :int	sem: int	book-ISBN: int	

Write the queries in MySQL for the following statements:

- a. Enter at least five tuples for each relation.
- b. Produce a list of text books (include Coursecode, Book-ISBN, Book-title) in the alphabetical order for courses offered by the 'CSPG' department that use more than two books.
- c. List any department that has all its adopted books published by a specific publisher.
- 3. Write a program using PHP to categorize the names based on gender and arrange it according to the alphabets and number of words in a name.
- 4. Write a program in PHP to print the count of the given word as an independent word in a text file WCOUNT.TXT. For example, if the content of the file WCOUNT.TXT is "There was a peacock in the zoo. The peacock was very beautiful." and the word to be counted is 'peacock' then 2 should be the program output.
- 5. Create a PHP form with Name, Register number, Batch, Address, E-mail and Phone numbers text fields. On submitting, store the values in MySQL student table. Retrieve and display the data based on Name.
- 6. Write a PHP program to insert the details of the 4 users who register with the website by using registration form and implement validation for the given input.
- 7. Write a PHP program to implement the files upload and download based on the given criteria:
  - (i) File should be less than 50KB

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- (ii) File should be in PDF or Word format
- 8. Write a PHP program to implement session and cookies.
- 9. Write a Perl program to keep track of the number of visitors visiting the college web page and to display the count of visitors, with proper headings.
- 10. Write a Perl program to insert Name, Age. Gender, Marital Status, Educational Qualification, a Occupation and Annual Income information entered by the user into a MySQL table and to display the current contents of this table.



-	Sem.	Course Code	CORE PAPER – XVI PYTHON PROGRAMMING	Total Ma	Total Marks: 100		Credits
	IV	17PBHCT401	FITHON FROGRAMMING	CIA:25	ESE:75	4	4

- Understood the basic concepts and various data types of Python
- Understood about the files, functions and modules
- Understood the GUI, Web and Database programming

#### Course Outcomes:

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

- CO1 Apply basic concepts of Python programming
- CO2 Implement strings, list and tuples data type
- CO3 Define functions and handle exceptions
- CO4 Import modules and packages to create an application
- CO5 Develop games and web applications using the GUI and DB-API

#### UNIT-I

Welcome to Python: Introduction – Origins – Features - Downloading and Installing Python - Running Python - Python Documentation - Comparing Python - Other Implementations. Getting Started: Program Output, the print Statement - Program Input and the raw\_input()Built-in Function. Python Basics: Statements and Syntax - Variable Assignment – Identifiers - Basic Style Guidelines - Memory Management - First Python Programs. Numbers: Introduction – Integers - Double Precision Floating Point Numbers - Complex Numbers – Operators - Built-in and Factory Functions - Other Numeric Types.

#### **UNIT-II**

Sequences: Strings, Lists and Tuples: Sequences – Strings - Strings and Operators – String - Only Operators - Built-in Functions - String Built-in Methods - Special Features of Strings – Unicode – Lists – Operators - Built-in Functions - List Type Built - in Methods - Special Features of Lists – Tuples - Tuple Operator and Built-in Functions - Special Features of Tuples. Mapping and Set Types: Mapping Type: Dictionaries - Mapping Type Operators - Mapping Type Built-in and Factory Function - Mapping Type Built-in Methods - Dictionary Keys - Set Types - Set Types Operators - Built-in Functions - Set Type Built-in Methods.

#### UNIT-III

Conditional and Loops: if Statement - else Statement - elif Statement - Conditional Expressions - while Statement - for Statement - break Statement - continue Statement - pass Statement - Iterators and the iter() Function - List Comprehensions. Files and Input / Output: File Objects - File Built-in Functions - File Built-in Methods - File Built-in Attributes - Standard Files - Command Line Arguments - File System - File Execution.

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Errors and Exceptions: Introduction - Exceptions in Python - Detecting and handling Exceptions - Context Management - Exceptions as Strings - Raising Exceptions - Assertion - Standard Exceptions.

#### UNIT-IV

Functions and Functional Programming: Functions - Calling Functions - Creating Functions - Passing Functions - Formal Arguments - Variable-Length Arguments - Functional Programming - Variable Scope - Recursion - Generators. Modules - Modules and Files - Namespaces - Importing Modules - Features of Module Import - Module Built-in Functions - Packages - Other Features of Modules.

#### UNIT-V

Regular Expressions: Introduction - Special Symbols and Characters - REs and Python.

Internet Client Programming: Internet Clients - Transferring Files - Electronic Mail.

Multithreaded Programming: Python, Threads and the Global Interpreter Lock - thread module. GUI Programming: Introduction - Tkinter and Python Programming. Web Programming: Web Surfing with Python: Creating Simple Web Clients. Database Programming: Introduction - Python Database Application Programmer's Interface (DB-API).

#### TEXTBOOK:

Wesley J.Chun, Core Python Programming, Second Edition, Prentice Hall, 2006.

#### **BOOKS FOR REFERENCE:**

- 1. M.N. Rao, Fundamentals of Open Source Software, PHI Learning Pvt. Ltd., Delhi, 2015.
- 2. Mark Summerfield, Programming in Python 3, Second Edition, Pearson Education, 2011.
- 3. Michael Dawson, Python Programming for the Absolute Beginner, Third Edition, Cengage Learning, 2010.
- 4. Mark Lutz, Learning Python, Fourth Edition, O'Relly, 2000.

QUESTION PAPER PATTERN						
SECTION - A	SECTION - B	SECTION - C				
$10 \times 1 = 10 \text{ Marks}$	$5 \times 7 = 35$ Marks	$3 \times 10 = 30 \text{ Marks}$				
(Multiple Choice, Four options) Two questions from each unit	(Either or choice) Two questions from each unit	(Answer any three Questions) One question from each unit				

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DEPAR Dr. N. RAMAN KONG PRINCIPAL, KONGU ARTS AND SCIENCE COLLEGE (MUTONOMOUS) NANJANAPURAM, ERODE - 638 14-

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Sem.	Course Code	CORE PRACTICAL – VII	Total Ma	rks: 100	Hours Per Week	Credits
IV	17PBHCP410	PYTHON PROGRAMMING LAB	C1A:40	ESE:60	5	4

- Practical knowledge in implementing the basic concepts in Python
- Practical knowledge in developing a game in GUI
- Practical knowledge in Query Processing using Python with MySQL

#### Course Outcomes:

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

- CO! Implement dynamic and interactive Python applications
- CO2 Develop programs using different data types in python
- CO3 Implement mail merge concepts in Python
- CO4 Develop games using GUI
- CO5 Develop a Python application and establish connectivity with a MySQL
- Write a Python program that will store the schedule for a given day for a particular TV station. The program should ask you for the name of the station and the day of the week before asking you for the name of each show and the start and stop times. Once the schedule is complete it should be displayed as a table.
- 2. Develop a python program to illustrate the different SET operations.
- 3. Write a Python program to find whether the outside is it gloomy or not.
- 4. Write a program that generates Quiz for revision using Python.
- 5. Create a body of the mail content and recipients list, store it separately in a text file and implement the merge mail concept using Python.
- 6. Write a Python Program to check a given sentence is a pangram or not using function/Module.
- 7. Develop a program of threading; include methods of thread class using Python.
- 8. Write a python program to find the color of the text and update the score using GUI.
- 9. Write a Python program to create a Stay Alive Game using GUL.

10. Create an employee table to store and retrieve a data using Python with MySQL.

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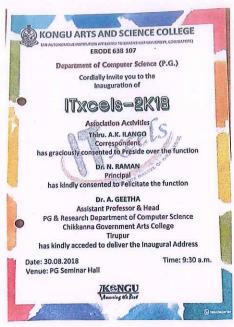
# **ACTIVITIES**



# KONGU ARTS AND SCIENCE COLLEGE (AUTONOMOUS) ERODE – 638107

#### DEPARTMENT OF COMPUTER SCIENCE (P.G.

Seminar on "Big Data Tools, Techniques and Analytics" 30 August 2018



The Department of Computer Science (P.G.) has inaugurated the ITxcels Association Activities and organized a Seminar on "Big Data Tools, Techniques and Analytics" on 30<sup>th</sup> August 2018. The Resource Person was Dr.A.Geetha, Assistant Professor & Head, Department of Computer Science, Chikkanna Government Arts College, Tirupur.

No. of Participants: 41

The objective of this seminar is to impart knowledge on Big Data. The seminar was attended by M.C.A. Students. The resource person has explained in detail

about the tools and techniques used for big data. The students understood about the process used to extract meaningful insights, such as hidden patterns, unknown correlations, market trends and customer preference. They gained knowledge about big data analytics advantages such as better decision making and preventing fraudulent activities.



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HEAD OF THE DEPAR MENT DEPARTMENT OF COMPUTER SCIENCE (PG) KONGU ARTS AND SCIENCE COLLEGE (AUTONOMOUS) Dr. N. RAMAN
PRINCIPAL,
KONGU ARTS AND SCIENCE COLLEGE
(AUTONOMOUS)
NANJANAPURAM, ERODE - 638 107.

MANUAL COMPONENTS



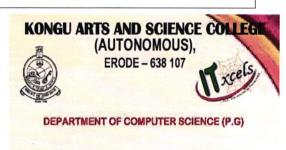
# KONGU ARTS AND SCIENCE COLLEGE (AUTONOMOUS) ERODE – 638107

#### DEPARTMENT OF COMPUTER SCIENCE (P.G.)

## Workshop on "JQuery" 15 September 2018

The Department of Computer Science (P.G.) has organized a Workshop on "JQuery" on 15 September 2018. The Resource Person was Mr. G.Arunkumar, Team Lead & Architect, Kurunji Technologies, Bodi.

The objective of this workshop is to impart knowledge on JQuery. The workshop was attended by M.C.A. Students. The resource person has provided information about JavaScript library that simplifies the interactions between an HTML/CSS document. The students learned the basics and coding in Java programming for web development and the creation of dynamic web pages for web applications, e-commerce applications, and database applications.



WORKSHOP - HANDS ON TRAINING IN

**JQuery** 



Resource Person
Mr. G.Arunkumar
Team Lead & Architect

Kurunchi Technologies, Bodi

Date: 15.09.2018 (Thursday)

Venue: Computer Center - III

Main Block

Assoring the heat

No. of Beneficiaries: 43



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## KONGU ARTS AND SCIENCE COLLEGE (AUTONOMOUS) ERODE – 638107

#### DEPARTMENT OF COMPUTER SCIENCE (P.G.)

Seminar on "Cyberbully Detection an Application of Opinion Mining"

10 January 2019





The Department of Computer Science (P.G.) has organized a Seminar on "Cyberbully Detection an Application of Opinion Mining" on 10 January 2019. The Resource Person was Dr. D. Devakumari, Assistant Professor, PG and Research Department of Computer Science, Government Arts College (Autonomous), Coimbatore.

The objective of this seminar is to impart knowledge on Opinion Mining. The seminar was attended by M.C.A. Students. The resource person has delivered information about the cyberbullying which occurs mostly on social networking sites and issues and challenges in **detecting** the faults. The students acquired the skill of using an Opinion Mining, Learning, Natural Machine Language Processing (NLP) in an educational context to detect the sending, posting, or sharing negative, harmful, false, or mean content about someone else in an application. This approach allows processing students comments, detections powerful and also creating analytics.

No. of Beneficiaries:40

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