




VALUE ADDED COURSES

2019-2020

BROCHURE



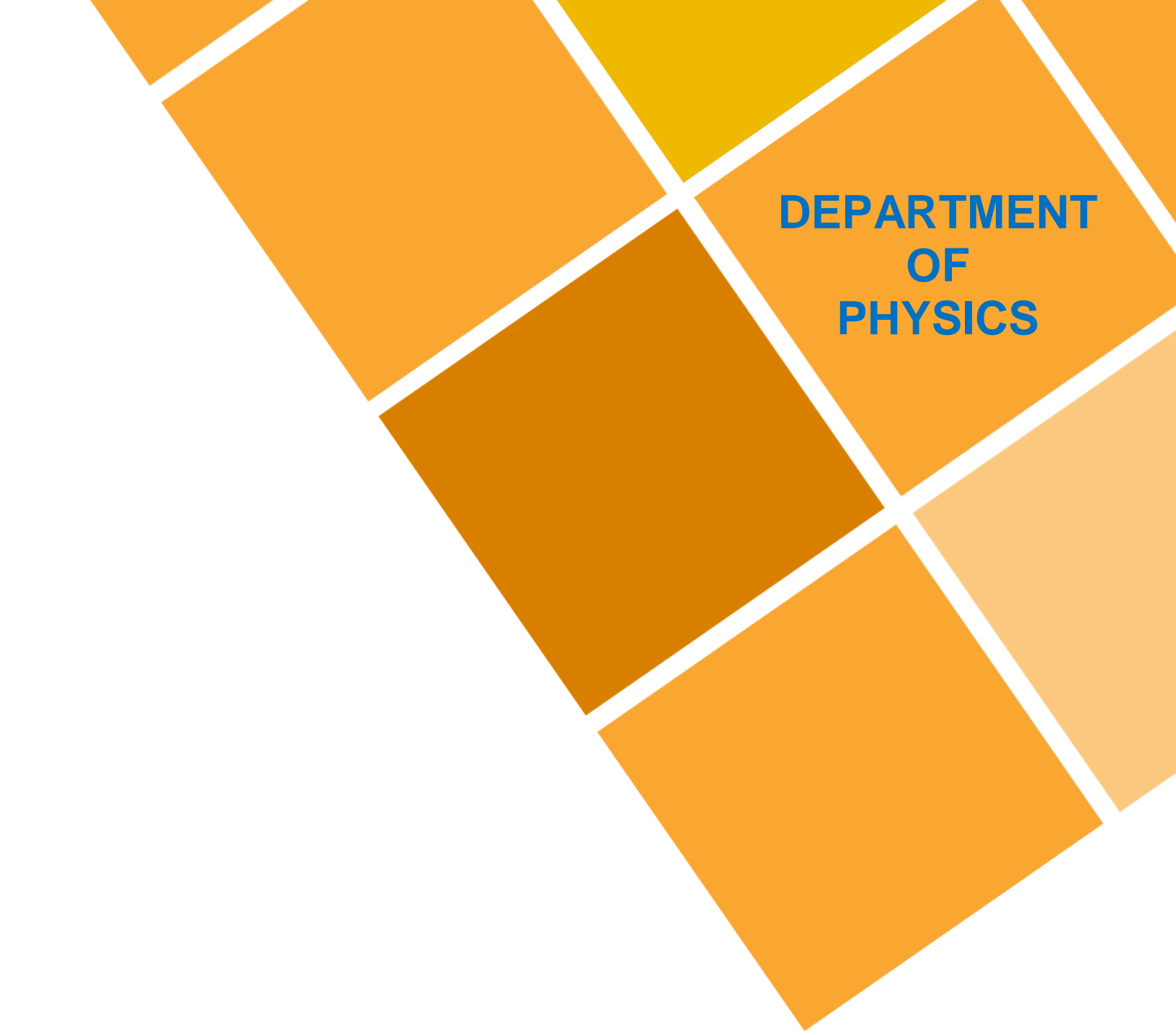
**ACADEMIC YEAR
2019 - 2020**

**LIST OF COURSES
&
SYLLABUS**



P.K.R. ARTS COLLEGE FOR WOMEN
Accredited with 'A' Grade by NAAC
Autonomous Institution – Affiliated to Bharathiar University
Gobichettipalayam

DEPARTMENT	COURSE CODE	COURSE NAME
PHYSICS	19VAPHU1	Basic Electricity and Electronics
COMPUTER SCIENCE	19CAUA01	IBM CE – Enterprise Applications for Cloud Environment (J2EE) using IBM Rational Application Developer & IBM Blue Mix
	19CSUVA01	IBM CE – Enterprise Mobile Application Development and Deployment using IBM Work light
	19ITUVA01	IBM CE – Essentials of Big Data with Hadoop using IBM Info Sphere Big Insights
COMMERCE	18CGUVA1/18CCUVA1/ 18CPUVA1	Tally ACE
MANAGEMENT	19BAPVA3	Agri – Preneurship



**DEPARTMENT
OF
PHYSICS**

COURSE

- **Basic Electricity & Electronics**

SYLLABUS

BASIC ELECTRICITY AND ELECTRONICS

UNIT I – INTRODUCTION

History of Electronics – Evolution of Electronics - Impact of Electronics in the Modern World
– Need to understand Basic Principles of Electronics

UNIT II- ELECTRICITY

Introduction - Basic Electricity – Electricity and Magnetism Basics- Sine waves-AC vs. DC-
AC Voltage- Single- Phase and Three –Phase – Electric power - Watt

UNIT III – BASIC ELECTRONIC COMPONENTS

Resistors and Capacitors: Types, Specifications – Resistors-Standard values, Marking, Colour
Coding-Inductors and Transformers: Types, Specifications, Principle of Working

UNIT IV – LEARNING BY DOING

Test equipments - Soldering- Construction of Basic Electronic Circuits

UNIT V – FAULT FINDING AND REPAIR OF PERIPHERALS

Fault finding and Repair of Peripherals in Basic Electronic and Electric Devices – Repair of
Advanced Devices (UPS, Mobile Phones, Mixer Grinder) - Device – I- Device – II

Reference:

1. Concepts of Physics – Volume I & II- H.C.Verma- Bharathi bhavan Patna
2. Basic Physics – Second Edition – Karl F.Kuhn



DEPARTMENT OF COMPUTER SCIENCE

COURSES

- **IBM CE – Enterprise Applications for Cloud Environment (J2EE) using IBM Rational Application Developer & IBM Blue Mix**
- **IBM CE – Enterprise Mobile Application Development and Deployment using IBM Work light**
- **IBM CE – Essentials of Big Data with Hadoop using IBM Info Sphere Big Insights**

IBM CE - Enterprise Applications for Cloud Environment (J2EE) using IBM Rational Application Developer & IBM BlueMix

About Course

This instructor-led course is designed to teach students the basic concepts and terminology of cloud computing.

After establishing the definition of cloud computing, this course describes the various service delivery models of a cloud computing architecture, and the ways in which clouds can be deployed as public, private, hybrid, and community clouds. Students also learn about the security challenges that cloud deployments experience, and how these are addressed. The course also describes IBM cloud computing architecture and offerings, the IBM WebSphere CloudBurst appliance, and the IBM WebSphere Hypervisor edition software product.

A number of self-running and hands-on demonstrations in simulation mode enable students to experience how to sign onto and use cloud-based instances. The hands-on demonstrations include applying for a contract to use the IBM

Smart Business Development and Test Cloud. Students sign onto the IBM Smart Business Development and Test Cloud, create an instance of the cloud, and connect to it. Other self-running demonstrations focus on getting started with cloud computing using the IBM WebSphere CloudBurst appliance. In the final exercise, students complete a crossword puzzle on what they have learned

Contents

This course covers the following topics:

After completing this course, you should be able to:

Define cloud computing - Identify the key characteristics of cloud computing- List the benefits of using clouds

Describe some of the challenges to adopting a cloud architecture -Describe key cloud computing concepts and terminology

Describe the service delivery models in cloud computing:

- Identify the software as a service (SaaS) delivery model
- Identify the platform as a service (PaaS) delivery model
- Identify the infrastructure as a service (IaaS) delivery model

List the various cloud deployment scenarios:

- Describe the features of private, public, hybrid, and community clouds

- List some additional cloud deployment types

- Select the most appropriate deployment model based on a set of business and technical requirements

Review the integration of security into the cloud reference model -Describe security considerations in cloud computing -Identify security options available in cloud computing - Identify the top security threats to cloud computing

Describe the architecture of IBM cloud computing and IBM cloud computing

offerings: Position the various vendors in the service delivery model of cloud computing-

Illustrate an IBM example cloud architectural configuration -Describe some of the IBM cloud offerings

Describe the capabilities of Web Sphere Cloud Burst and Web Sphere Hypervisor Edition

INTRODUCTION TO IBM WORKLIGHT V5.0 FOR MOBILE APPLICATION DEVELOPMENT AND DEPLOYMENT

About the course

This course explains how to develop mobile web applications by using IBM Worklight Studio, a plug-in for WebSphere Developer Tools (WDT) for Eclipse. It also covers how to deploy the applications to an IBM Worklight Server running on a WebSphere Application Server Liberty Profile.

The course covers applications and adapters, and looks at security issues such as user authentication and how to protect sensitive data that is held on a mobile device. Other topics include notification of updates, globalization, and the various JavaScript languages that can be used.

Contents

This course covers the following:

- **Setup**
 - o Setting Up Your Development Environment
 - o Setting Up Your iOS Development Environment
 - o Setting Up Your Android Development Environment
 - o Setting Up Your BlackBerry Development Environment
 - o Setting Up Your Windows Phone Development Environment

- **Basics**
 - o Writing Your First Application (Exercise and Code Sample)
 - o Previewing your Application in iOS environment
 - o Previewing your Application in Android environment
 - o Previewing your Application in BlackBerry environment
 - o Previewing your Application in Windows Phone environment
 - o Rich Page Editor
 - o Mobile Browser Simulator
 - o Worklight Client API Basics (Exercise and Code Sample)

- **Server-side development**
 - o Integration Adapters
 - o Creating SQL Adapters (Exercise and Code Sample)
 - o Creating HTTP Adapters
 - o Using HTTP Adapters with SOAP Services (Exercise and Code Sample)
 - o Creating Cast Iron Adapters
 - o Using Java in Adapters (Exercise and Code Sample)
 - o Invoking Adapter Procedures from the Client Applications (Exercise and Code Sample)
 - o Advanced Adapter Usage and Mashup (Exercise and Code Sample)

Mobile Client Development

- Overview of Client Technologies Common Controls

(Exercise and Code Sample)

- Code Optimization for Specific Environments
- Skins (Exercise and Code Sample)
- Apache Cordova

Multiple Pages and Fragments (Exercise and Code Sample)

- Combining Native and Web Pages Offline Access

(Exercise and Code Sample)

- Encrypted Cache (Exercise and Code Sample)
- iOS Development

iOS Development Combining Native and Web Pages (Exercise and Code Sample)

- iOS Development Using the Apache Cordova Plugin (Exercise and Code Sample)
- Android Development

Android Development Combining Native and Web Pages (Exercise and Code Sample)

- Android Development Using the Apache Cordova Plugin (Exercise and Code Sample)
- Blackberry Development Windows Phone

Development Developing Mobile Web apps Working

with UI frameworks Client Side Debugging

Enabling Translation (Exercise and Code Sample)

- Integrating Server Generated Pages in Worklight Applications (Exercise and Code Sample)
- Direct Update

Authentication

- Authentication Concepts (Exercise and Code Sample)
- Adapter Based Authentication (Exercise and Code Sample -(single step) & (double step))

Custom Authenticator and Login Module (Exercise and Code Sample)

- WebSphere LTPA Based Authentication)

- Team Work

- Team Development using RTC
- Shell Development Concepts
- Android Shell Development
- iOS Shell Development (Exercise and Code Sample)

- Advanced

- Push Notifications (Exercise and Code Sample)
- Moving from Development Environment to Remote QA and Production Servers
- Device Analytics (Exercise and Code Sample)
- Integrate Existing Web Content (Exercise and Code Sample)

- **Non-mobile environments**

 - Developing Desktop Apps

 - Developing Web Apps for Facebook and iGoogle

- **Dojo Mobile**

 - Running Dojo based sample - (Exercise and Code Sample)

 - Running Dojo based Mysurance end to end sample (Exercise and Code Sample)

 - Running Dojo Mobile based Apache Cordova sample (Exercise and Code Sample)

BIG DATA USING HADOOP AND IBM INFOSPHERE

About the Course

In this training you will learn about Big data and Hadoop using IBM Info Sphere Big Insights Basic edition. You will also get acquainted with IBM Info Sphere Streams, a product that can help analyze data 'on the go'.

After completing this course, you should be able to:

- Learn what big data and Hadoop are
- Understand the two types of big data
- Work with Hadoop using IBM Info Sphere Big Insights
- Get acquainted with IBM Info Sphere Streams

Gain practical knowledge with the hands-on labs

Content

Module : I

What is big data? What is Hadoop? Working with Big Insights

Module :II

Hadoop architecture

Hands-on lab

Module : III

MapReduce

Hands-on lab

Big Insights Web Console

Hands-on lab

Module : IV

Pig, Hive, and Jaql

Hands-on lab

Moving data with Flume

Hands-on lab



**DEPARTMENT
OF
COMMERCE**

COURSE

- **Tally ACE**

SYLLABUS

TALLYACE

This beginner level certification will recognize skills of a candidates learning Tally.ERP 9. Online assessment will be conducted and successful candidates will earn a verifiable digital certificate from Tally.

TallyACE certifies candidate as job ready and opens up multiple career opportunities. A certified candidate can opt to become an entrepreneur as well.

Syllabus

- Fundamentals of Accounting
- Maintaining Chart of Accounts in Tally.ERP 9
- Maintaining Stock Keeping Units (SKU)
- Recording Day-to-Day Transactions in Tally.ERP 9
- Accounts Receivable and Payable Management
- MIS Reports
- Goods and Services Tax (GST)
- Recording Vouchers with TDS (Tax Deducted at Source)

Assessment Features

- Assessment Format : Online
- Duration : One Hour
- No. of Exams : One Exam
- Certification Type : Digital



**DEPARTMENT
OF
MANAGEMENT**

COURSE

- **Agri – Preneurship**

AGRI-PRENEURSHIP

UNIT I: INTRODUCTION ABOUT AGRI-PRENEURSHIP

Agri-Preneurship- Need for developing agri- Preneurship in India- Opportunities for developing Agri-Preneurship.

UNIT II : VALUE ADDITION

Practical Session - Value added products in fruits-Value addition in cereals

UNIT III: MILK & VEGETABLES

Value added products in Vegetables- Value added products in milk.

UNIT IV: MILLETS

Practical Session- Value addition – Scope –and Pulses

UNIT V: PRODUCT IN MILLETS

Value addition in millets, Practical Session