



Lokmanya Tilak Jankalyan Shikshan Sanstha's
PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING
Harpur Nagar, Umred Road (Near Bada Tajbagh), Nagpur-24
(Approved by AICTE, New Delhi, Govt. of Maharashtra
and affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)
Email: principalpbcoe@gmail.com, Website: www.pbcoe.edu.in
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List of Add-on/ Certificate Course offered During 2018-19

Sr.No.	Name of Program / Certificate Program Offered	Course Code
1	Certificate Course on "Linux and Shell Programming"	CSE181901
2	Certificate Course on "Java Programming"	CSE181902
3	NPTEL Certificate Course on "Programming in C++"	CSE
4	NPTEL Certificate Course on "Programming in Java"	CSE
5	NPTEL Certificate Course on "Introduction to Programming in C"	CSE
6	NPTEL Certificate Course on "The Joy of Computing Using Python"	CSE
7	Certificate Course on Tableau	IT181901
8	Certificate Course on HTML5	IT181902
9	Certificate Course on R Programming	IT181903
10	Certification course on Java Programming	EC181901
11	Certification course on Introduction to Robotics	EC181902
12	Certification course on Hands on VHDL Using Altera Quartus DE-II Board	CE181903
13	Certificate Course on "Application of Operations Research"	ME181901
14	Certificate Course on "Robots & Their Application in Mechanical Engineering"	ME181902
15	Certificate Course on "Trends in Mechanical Engineering"	ME181903
16	General Aspects In Civil Engineering	CV181901

Certified Documents From Page Number 2- Page Number 52.



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Department of Computer Science & Engineering

Academic session 2018-19

Report on Free Certification Course on Linux & Shell Programming

- 10.Event Title : Linux & Shell Programming
11.Event Date : 21/02/2019
12.Event conduction duration : 21/02/2019-20/03/2019
13.Event venue : Project lab 1st Flour, PBCOE
14.Event resource person : Mr. K. N. Hande, Prof. R. P. Dagde
15.Name of Event Coordinator : Prof. R. P. Dagde
16.Number of students : 30
17.Objective : To execute various UNIX Commands on standard Unix- Linux Operating System . To understand the shell programming.
18. Outcome : Student have gain insight into basic linux commands for file Handling & programming along with shell structure & Its usages.



Principal
Priyadarshini Bhagwati College of Engineering
Umred Road, Nagpur.

Head of Head
Computer Science & Engineering Department
Priyadarshini Bhagwati College of Engineering
Umred Road, Nagpur.



Lokmanya Tilak Jankalyan Shikshan Sanstha's
Priyadarshini Bhagwati College of Engineering



(Recognized by AICTE, New Delhi, Govt. of Maharashtra and Affiliated to R.T.M. Nagpur University)

Principal: - Dr. N. K. Choudhari

Phone: +91-712-2710282, 82. Fax: +91-712-2710283

E-mail principalpbcoe@gmail.com

Website: www.bcce.ltjss.net

NOTICE

Dt: 16.02.2019

All the HoD's hereby informed that Department of Computer Science and Engg is organizing **One month free Certificate courses on JAVA Programming and Linux Shell Programming.** You are hereby informed to circulate the flier of the courses attached herewith to the students of your department. Certificate will be issued to the students after successful completion of the course. The detail contents of the course and other information is attached herewith.

Sr No	Name of the Course	Date of Commencement	Venue	Seats
1	JAVA Programming	21/02/19	Project lab, CSE Dept	30
2	LINUX and Shell Programming	21/02/19	Computer Center, I Floor	30

Dr. N. K. Choudhari
PRINCIPAL

Copy To: **HoD** I YR/EN/EC/CSE/IT for circulation and wide publicity.

**SCHEDULE
REGISTRATION
10:30-5:00**

1. Limited Seats(30)
2. Registration on First Come First Served
3. Online Hands on Course With practical Exposure
4. Last Date of Registration 20/02/2019



**PRIYADARSHINI BHAGWATI
COLLEGE OF ENGINEERING**

Department Of Computer Science & Engineering

Free Certificate Course

on

Linux & Shell Programming

2019

TIME: 4PM - 5PM | DATE: 21/02/2019 To 20/03/2019

Contacts:

Mr. K. N. Hande (HOD., CSE)

Mob No. 9822422666

Miss. R. P. Dagde (Asst. Prof., CSE)

Mob No. 9561122058

**Venue
1st Floor Computer
Center Lab**

**Principal
Priyadarshini Bhagwati College of Engg-
Umred Road, Nagpur.**

**Head
Computer Science & Engineering Department
Priyadarshini Bhagwati College of Engineering
Umred Road, Nagpur.**

Department of Computer Science and Engineering

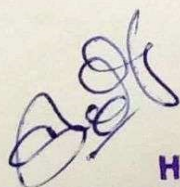
Academic session 2018-19

Free Certification Course

Course Name:- Linux Shell Programming

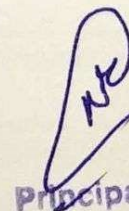
Sr. No.	Contents
Day 1	What is Operating System. Introduction to LINUX, Basics commands
Day 2	working with directories commands
Day 3	working with files commands
Day 4	control operators commands
Day 5	shell variables commands
Day 6	shell embedding and options commands
Day 7	shell history commands
Day 8	I/O redirection commands
Day 9	Filters commands
Day 10	basic Unix tools commands
Day 11	regular expressions
Day 12	Introduction to vi
Day 13	Scripting, scripting introduction, scripting loops
Day 14	scripting parameters, more scripting
Day 15	Introduction to users, user management, user passwords
Day 16	standard file permissions
Day 17	Shell program for even or odd number, addition of two number.

Day 18	Shell program to check and display 10 leap years., find the area and circumference of a circle.
Day 19	Shell program to check the given number and its reverse are same. , check the given string is palindrome or not.
Day 20	Shell program to find the sum of odd and even numbers from a set of numbers , to check the given integer is Armstrong number or not.
Day 21	Shell program to check the given integer is prime or not, prime numbers between 1 and 50.
Day 22	Shell program to execute various UNIX commands using case statements set of numbers., to count the number of vowels in a line of text.
Day 23	Shell program to find the smallest number from a set of numbers, to find the sum of all numbers between 50 and 100, which are divisible by 3 and not divisible by 5.
Day 24	Shell program to print the reverse of a number, to find the factorial of a number using for loop.
Day 25	Shell program to generate Fibonacci series.
Day 26	C Program to Check if a given Integer is Odd or Even, program takes the number N and finds the sum of odd and even numbers from 1 to N.
Day 27	C Program to Check if a given Integer is Positive or Negative C Program to Read Two Integers M and N & Swap their Values
Day 28	C Program to Convert the given Binary Number into Decimal C Program to Reverse a Given Number
Day 29	C Program to Print Diamond Pattern C Program to Print any Print Statement without using Semicolon
Day 30	C Program to Find the Transpose of a given Matrix C Program to Perform Matrix Multiplication using Recursion



Head

Computer Science & Engineering Department
Priyadarshini Bhagwati College of Engineering
 Umred Road, Nagpur.



Principal
Priyadarshini Bhagwati College of Engg.
 Umred Road, Nagpur.



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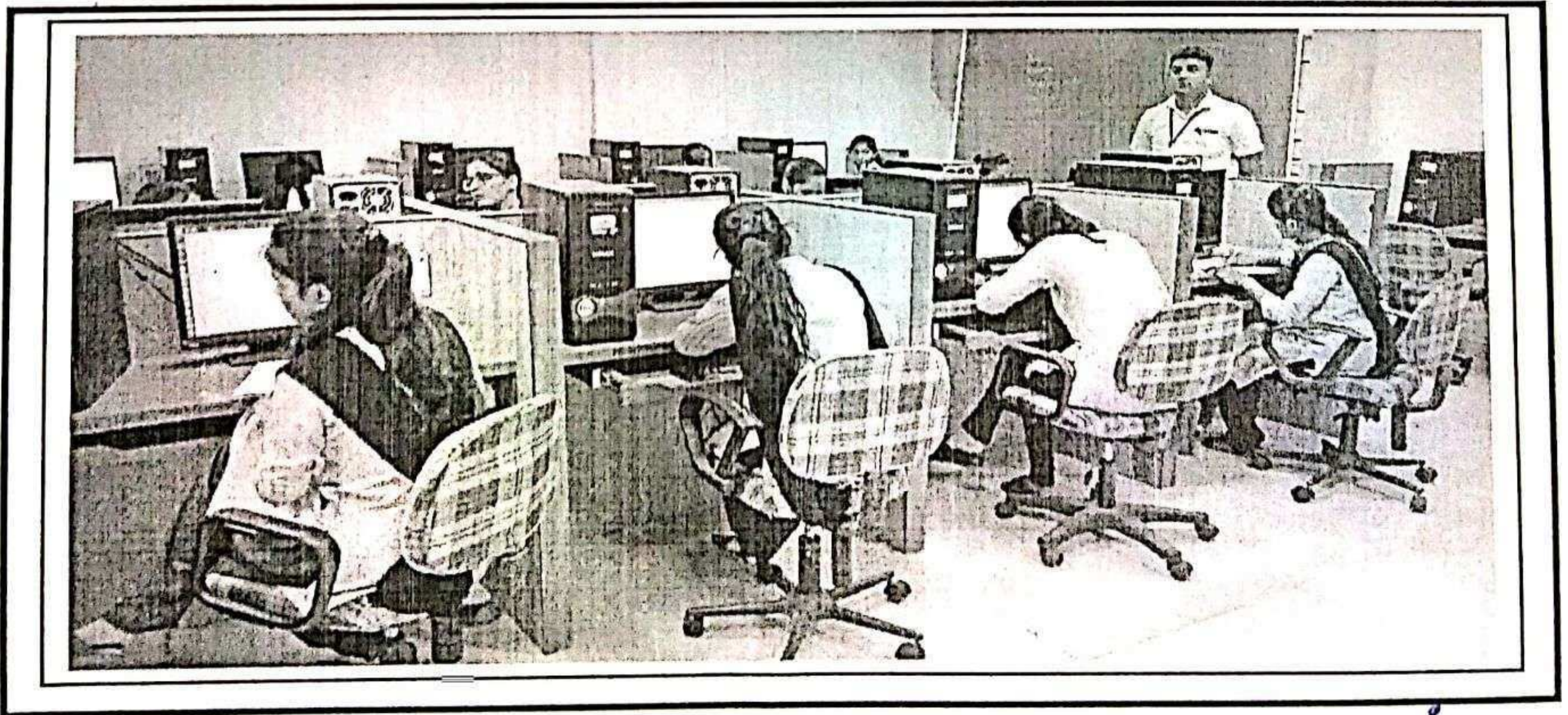
Department of Computer Science & Engineering

Academic session 2018-19

Report on Free Certification Course on java Programming

1. Event Title : Java Programming
2. Event Date : 21/02/2019
3. Event conduction duration : 21/02/2019-20/03/2019
4. Event venue : Project lab 1st Flour, PBCOE
5. Event resource person : Prof. D. B. Khadse, Prof. A. Bhaisare

6. Name of Event Coordinator : Prof. A. Bhaisare
7. Number of students : 30
8. Objective : To build software development skill using java programming for Real world application.
9. Outcome : Student have gain the java programming usage in s/w development life cycle and its applications



NK

Principal

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CamScanner
Priyadarshini Bhagwati College of Engineering
Umred Road, Nagpur.

[Signature]

Head of Head
Computer Science & Engineering Department
Priyadarshini Bhagwati College of Engineering
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2	LINUX and Shell Programming	21/02/19	Computer Center, I Floor	30

Dr. N. K. Choudhari
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PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING

Department Of Computer Science & Engineering

Free Certificate Course

on

Java Programming

2019

TIME: 4PM - 5PM | DATE: 21/02/2019 To 20/03/2019

Contacts:

Mr. D. B. Khadse (Asst. Prof., CSE)

Mob No. 9545341777

Mr. A. G. Bhaisare (Asst. Prof., CSE)

Mob No. 9175746353

Principal

Priyadarshini Bhagwati College of Engg.
Umred Road, Nagpur.


Head

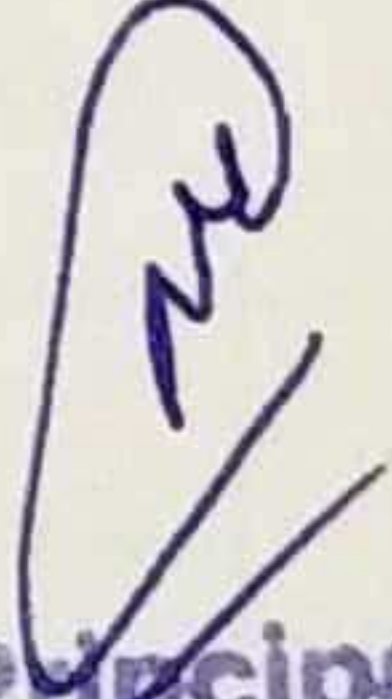
Computer Science & Engineering Department
Priyadarshini Bhagwati College of Engineering
Umred Road, Nagpur.

Java Programming Day-wise Schedule

Sr. No.	Day	Topic
1.	Day-01	Introduction to Java, Data types, Literals: Types of Literals, Operators
2.	Day-02	Control Statements: If-else, switch, do-while
3.	Day-03	while, for, enhanced for loop, Nested Loop, break, continue, return statements
4.	Day-04	Classes: Fundamentals of classes, Declaring objects, Assigning objects
5.	Day-05	Reference variables, Overloading methods, Constructors
6.	Day-06	this keyword, Wrapper classes, Using object as parameter, Argument passing
7.	Day-07	Command line arguments, returning object
8.	Day-08	static modifier, final modifier
9.	Day-09	Nested classes: inner classes, Garbage collection
10.	Day-10	Arrays, Vectors and Generics
11.	Day-11	String Handling: String and StringBuffer class, String constructors
12.	Day-12	Data conversion using valueOf(), toString() methods
13.	Day-13	Methods for String Comparison, Searching string and modifying string.
14.	Day-14	Object class, Inheritance
15.	Day-15	Abstract classes and methods, Interfaces, Method Overriding,
16.	Day-16	Packages: Package Fundamental, Access protection, Importing packages
17.	Day-17	Exception Handling: Fundamental Exception type: Checked, Unchecked and Uncaught Exceptions,
18.	Day-18	throw and throws keywords, Creating user defined exceptions, Built-in Exceptions.

19.	Day-19	Multithreading: Fundamentals, Thread Life Cycle, Ways of creating threads, Creating multiple threads
20.	Day-20	isAlive(), join(), Thread Synchronization, Thread priorities
21.	Day-21	Inter-thread communication, Methods for suspending, resuming and stopping threads
22.	Day-22	I/O stream, Byte stream, Character stream, Pre-defined streams
23.	Day-23	Reading console input, Writing console output, PrintWriter class, Reading and Writing files
24.	Day-24	Introduction to Swings, AWT as a origin of Swing,
25.	Day-25	Key swing features, Components and container,
26.	Day-26	Swing packages, Event handling
27.	Day-27	Creating swing applets
28.	Day-28	Controls: label and image icons, JTextField
29.	Day-29	Swing Buttons, Tabbed Panes, JScrollPane
30.	Day-30	JList, JComboBox, JTable


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**PRIYADARSHINI BHAGWATI COLLEGE OF
ENGINEERING, NAGPUR**

Department of Information Technology

2018-19



**Free Certification Course
on
Tableau**

**Time: 9:30 AM to 10:30 AM | DATE: 02/08/2018 to 07/09/2018
VENUE- Project Lab, Department of Information Technology**

Contacts

Mr. M.S. Chaudhari(HOD, IT)
8806011511

Ms. A. A. Lokhande
(Asst. Prof, IT)
07620458576

Seat Capacity-50 only



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Department of Information Technology
Academic Session 2018-2019


NOTICE

Date -25/07/2018

All the Students are hereby informed that Department of Information Technology is organizing free certification Course on Tableau from dated 02/08/2018. Interested Students can enroll to the course, certificate will be issued after successful completion of the course.

The Details of the course and other information is attached herewith

Sr. No	Name of the Course	Date of Commencement	Venue	Seats
1	Tableau	02/08/2018	Project lab, IT Department	50


Prof. M.S. Chaudhari
HOD

Head
Information Technology Department
Priyadarshini Bhagwati College of Engineering
Umred Road, Nagpur, M.S.

PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING, NAGPUR

Department of Information Technology

Session 2018-19

Free Certification Course

**Course Name -Skill Development on Tableau
Syllabus**

Tableau Desktop (Introduction)

Introduction Tableau
Connecting to Excel, CSV Text Files
Getting Started
Product Overview
Connecting to Databases
Working with Data
Analyzing, Formatting
Introduction to Calculations
Dashboard Development
Sharing,Data Calculations
Aggregate Calculations
User Calculations
Table Calculations
Logical Calculations
String Calculations
Number Calculations
Type Conversion
Parameters
Filtering Conditions
Filtering Measures
Histograms
Sorting,Grouping,Sets
Tree maps, word clouds and bubble charts
Pareto Charts
Waterfall Charts
Bump Charts
Funnel Charts

Tableau Advanced

Data Blending
Basic MappingAdvanced Mapping Techniques



Course Coordinator
Ms. A. A. Lokhande
(Asst. Prof, IT)
0762045857

PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING, NAGPUR

Department of Information Technology

Session 2018-19


Free Certification Course

Course Name -Tableau

Syllabus

Day	Date	Topic
Day-1	2/08/2018	Introduction Tableau
Day-2	3/08/2018	Connecting to Excel, CSV Text Files
Day-3	4/08/2018	Getting Started
Day-4	6/08/2018	Product Overview
Day-5	7/08/2018	Connecting to Databases
Day-6	8/08/2018	Working with Data
Day-7	9/08/2018	Analyzing, Formatting
Day-8	10/08/2018	Introduction to Calculations
Day-9	11/08/2018	Dashboard Development
Day-10	13/08/2018	Sharing,Data Calculations
Day-11	14/08/2018	Aggregate Calculations
Day-12	16/08/2018	User Calculations
Day-13	18/08/2018	Table Calculations
Day-14	20/08/2018	Logical Calculations
Day-15	21/08/2018	String Calculations
Day-16	23/08/2018	Number Calculations
Day-17	24/08/2018	Type Conversion
Day-18	25/08/2018	Parameters
Day-19	25/08/2018	Filtering Conditions

Day-20	27/08/2018	Filtering Measures
Day-21	28/08/2018	Histograms
Day-22	29/08/2018	Sorting, Grouping, Sets
Day-23	30/08/2018	Tree maps, word clouds and bubble charts
Day-24	31/08/2018	Pareto Charts
Day-25	01/09/2018	Waterfall Charts
Day-26	03/09/2018	Bump Charts
Day-27	04/09/2018	Funnel Charts
Day-28	05/09/2018	Data Blending
Day-29	06/09/2018	Basic Mapping
Day-30	07/09/2018	Advanced Mapping Techniques


Ms. A. A. Lokhande
Program - Co-ordinator



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Department of Information Technology
Academic session 2018-2019


Report on Certification Course on Tableau


1. Title of the Course : Certification Course on "Tableau"
2. Course Code : IT181901
3. Event Date : 02-08-2018 to 07-09-2018
4. Event conduction duration : 30 Days
5. Event venue : Project Lab, IT Department, PBCOE
6. Event resource person/Coordinator : Ms. A. A. Lokhande, PBCOE, Nagpur
7. Number of students : 21
8. Objective : Students will learn how to build information dashboards and stories in order to present analytics to top management.
9. Outcome : Students get the knowledge of dashboards and stories, improves their skillset and helps them keep up with the changing trends to support their professional growth




Program Co-ordinator/Resource Person


Head
Prof. M. S. Chaudhari


IQAC Co-ordinator
Dr. Ms. A. R. Chaudhari


Principal
Dr. N. K. Choudhary

Priyadarshini Bhagwati College of Engg
Umred Road, Nagpur.

**PRIYADARSHINI BHAGWATI COLLEGE OF
ENGINEERING, NAGPUR**

Department of Information Technology

2018-19



**Free Certification Course
on
HTML5**

**Time: 9:30 AM to 10:30 AM | DATE: 03/12/2018 to 07/01/2019
VENUE- Project Lab, Department of Information Technology**

Contacts
Mr. M.S. Chaudhari(HOD, IT)
8806011511
Ms. G. Agre (Asst. Prof, IT)
9561658818

Seat Capacity-50 only



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Department of Information Technology
Academic Session 2018-2019


NOTICE

Date -25/11/2018

All the Students are hereby informed that Department of Information Technology is organizing free certification Course on HTML5 from dated 03/12/2018. Interested Students can enroll to the course, certificate will be issued after successful completion of the course.

The Details of the course and other information is attached herewith

Sr. No	Name of the Course	Date of Commencement	Venue	Seats
1	HTML5	03/12/2018	Project lab, IT Department	50


Prof.M.S.Chaudhari
HOD
Head

Information Technology Department
Priyadarshini Bhagwati College of Engineering
Umred Road, Nagpur.

PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING, NAGPUR

Department of Information Technology

Session 2018-19

Free Certification Course

Course Name -Skill Development on HTML5

Syllabus

Introduction to HTML5

- The history of HTML
- The different versions of HTML
- The structure of an HTML document

HTML elements

- The different types of HTML elements
- The attributes of HTML elements
- Using HTML elements to create web pages

HTML attributes

- The different types of HTML attributes
- The values of HTML attributes
- Using HTML attributes to customize web pages

HTML5 semantic elements

- The different types of HTML5 semantic elements
- Using HTML5 semantic elements to improve the accessibility and SEO of web pages

HTML5 forms

- The different types of HTML5 form elements
- Using HTML5 form elements to collect user input

HTML5 multimedia

- The different types of HTML5 multimedia elements
- Using HTML5 multimedia elements to embed audio, video, and images in web pages

HTML5 APIs

The different types of HTML5 APIs

Using HTML5 APIs to interact with the user's browser and device

HTML5 best practices

The different HTML5 best practices

Implementing HTML5 best practices to create accessible, SEO-friendly, and user-friendly web pages



Course Coordinator
Ms. G. Agré (Asst. Prof, IT)
9561658818



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Department of Information Technology
Academic session 2018-2019

Report on Certification Course on HTML5

1. Title of the Course : Certification Course on HTML5
2. Course Code : IT181902
3. Course Date : 03-12-2018 to 07-01-2019
4. Course conduction duration : 30 Days
5. Event venue : Project Lab, IT Department, PBCOE
6. Name of Event Coordinator : Ms. G. Agre, PBCOE, Nagpur
7. Number of students : 38
8. Objective : Learn the structure and markup language, Personalize web pages using text formatting, graphics, audio, and video elements.
9. Outcome : Upon completion students get the knowledge of web page development with advance features and can personalize their web pages.



Gujari
Program Co-ordinator/Resource Person

MS
Head
Prof. M. S. Chaudhari

Dr. Ms. A. R. Chaudhari
IQAC Co-ordinator
Dr. Ms. A. R. Chaudhari
IQAC Coordinator
Priyadarshini Bhagwati College of Engg,
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NK
Principal
Dr. N. K. Choudhary
Principal
Priyadarshini Bhagwati College of Engg
Umred Road, Nagpur

PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING, NAGPUR

Department of Information Technology

2018-19



Free Certification Course on R Programming

**Time: 4 PM to 5 PM | DATE: 27/02/2019 to 18/03/2019
VENUE- IT Department, Programming Language Lab**

Contacts

Mr. M.S. Chaudhari(HOD, IT)

8806011511

Dr. Mrs. Radha A. Pimpale(Asst. Prof, IT)

9423073189

Seat Capacity-20 only

**PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING,
NAGPUR**

NOTICE

Date -25/02/2019

All the HoD's are hereby informed that Department of Information Technology is organizing free certification Course on R Programming. You are hereby informed to circulate the flier of course attached herewith to the students of your department, Certificate will be issued to the students after successful completion of the course.

The Details of the course and other information is attached herewith

Sr. No	Name of the Course	Date of Commencement	Venue	Seats
1	R Programming	27/2/2019	Programming language lab, IT Department	20



Dr. N.K. Choudhari
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Department of Information Technology

Session 2018-19

Free Certification Course

Course Name - R Programming

Sr. No.	Contents
1	R - Installation
2	R - Input/Output Statement
3	R - Basic Syntax
4	R - Data Types, R - Variables
5	R - Operators, R - Decision Making
6	R - Loops
7	R - Functions
6	R - Strings
7	R - Vectors
8	R - Lists
9	R - Matrices
10	R - Arrays
11	R - Factors
12	R - Data Frames
13	R - Packages
14	R - Data Reshaping
15	R - Pie Charts, R - Bar Charts
16	R - Boxplots, R - Histograms
17	R - Line Graphs, R - Scatterplots
18	R - Mean, Median & Mode
19	R-Statistical Analysis
20	R-Statistical Analysis

Course Coordinator

Dr. Mrs. Radha A. Pimpale

9423073189

Ms. Gunjan Agre

9503887753



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Academic session 2018-19

Report on Certification Course on R Programming

- 1 Title of the Course : Certification Course on R Programming
- 2 Course Code : IT181903
- 2 Event Date : 27/02/19 to 25/03/19
- 3 Event conduction duration : 20 days
- 4 Event venue : Database Mangement System Lab, PBCOE
- 5 Event resource person and Co-ordinator : Dr. Mrs. Radha Pimpale, PBCOE, Nagpur
- 6 Number of students : 29
- 7 Objective: R is a programming language and software environment for statistical analysis, graphics representation and reporting. Tto focus on to handle large amount of data file for statistical analysis.
- 8 Outcome : The students came to know how to handle large amount of data and to perform statistical analysis, data analysis, draw different types of graphs and implantation of the programs in R Language.




Program

Co-ordinator/Resource
Person


Head

Prof. M. S. Chaudhari



IQAC Co-ordinator

Dr. Ms. A. R. Chaudhari



Principal

Dr. N. K. Choudhari

Priyadarshini Bhagwati College of Engg
Umred Road, Nagpur.

Priyadarshini Bhagwati College of Engg
Umred R



Lokmanya Tilak Jankalyan Shikshan Sanstha's
Priyadarshini Bhagwati College of Engineering, Nagpur.
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Department of Electronic & Communication Engineering

Academic session 2018-19

NOTICE

Date: 10/07/2018

All the students of Electronics and Communication Engineering Department are hereby informed that the department is going to organize **free Certification course on "Java Programming"**. The interested students register their name to the undersigned faculty.

The detail content of the course :

Name of course : Java Programming

Course Code : EC181901

Date of commencement : 16/07/2018 to 14/08/2018

Seats : 30

Hrs. : 30


Dr. (Ms.) D. M. Kate

HOD, E Dept.

Head
PBCOE Nagpur

Electronics & Communication
Priyadarshini Bhagwati College of Engg.
Umrer Road, Nagpur.

Copy to:

Principal Sir for kind information,
Dean Academics,
For circulation to faculty members,
For display on notice board of Deptt.



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Harpur Nagar, Umred Road (Near Bada Tajbagh), Nagpur-24
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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
Academic Session 2018-19

A Certificate Course on
"Java Programming"
CONTENTS

Sr. No.	Contents	No. of Hours
1	Introduction to Java : Overview of Java, its history and features, Setting up the development environment : Installing JDK and IDE, Writing your first Java Program : Hello World, Variables, data types, operators and control flow statements	4 Hours
2	Classes and Objects in Java : Defining classes, creating objects and invoking methods, Constructors and method overloading , Encapsulation and access modifiers	3 Hour
3	Inheritance and Polymorphism : Extending classes, method overriding and dynamic building, Abstract classes and interfaces, Packages and organizing code	3 Hours
4	Exception Handling in java : Handling and throwing exceptions, File I/O operations : Reading from and write to files, Introduction to Java collection framework : List, sets and maps	4 Hours
5	Introduction to multithreading : creating and managing threads in Java, Synchronization and thread safety, Thread communication and synchronization mechanism	4 Hours
6	Generics in Java : Using generic classes and methods. Lambda expressions and functional programming in Java, Java streams API for data processing	5 Hours
7	Introduction to Java frameworks and libraries : Spring, Hibernate, etc., Developing a small scale java application using a framework, Testing and debugging Java programs.	5 Hours
8	Practice Exercises and Assignments	2 Hours
	Total	30 Hours

Ms. D. M. Kate

Head of Department
Head

Electronics & Communication
Priyadarshini Bhagwati College of Engineering
Umred Road, Nagpur.



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Department of Electronic & Communication Engineering

Academic session 2018-19

NOTICE

Date: 23/12/2020

All the students of Electronics and Communication Engineering Department are hereby informed that the department is going to organize **free Certification course on "Introduction to Robotics"**. The interested students register their name to the undersigned faculty.

The detail of the course:

Name of Course : **Introduction to Robotics**
Course Code : **EC181902**
Date of Commencement : **01/01/2019**
Total Hrs : **30**
Seats : **30**

Dr. (Ms.) D. M. Kate
HOD, EC Dept. PBCOE
Nagpur

Head
Electronics & Communication
Priyadarshini Bhagwati College of Engg
Umred Road, Nagpur.

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
Academic Session 2018-19

A Certificate Course on
"Introduction to Robotics"
CONTENTS

Sr. No.	Contents	No. of Hours
1	Introduction to robotics- History, growth; Robot applications- Manufacturing industry, defense, rehabilitation, medical etc., Laws of Robotics	5 Hours
2	Robot mechanisms; Kinematics- coordinate transformations, DH parameters	3 Hours
3	Forward kinematics, Inverse Kinematics	2 Hour
4	Actuators (electrical)- DC motors, BLDC servo motors	3 Hours
5	Sensors, sensor integration	3 Hours
6	Control – PWM, joint motion control, feedback control	2 Hours
7	Computed torque control	2 Hour
8	Perception, Localisation and mapping	2 Hours
9	Probabilistic robotics, Path planning, BFS, DFS, Dijkstra, A-star, D-star; Voronoi, Potential Field, Hybrid approaches	3 Hours
10	Simultaneous Localization and Mapping	3 Hours
11	Introduction to Reinforcement Learning	2 Hours
	Total	30 Hours


Ms. D. M. Kate
Head of Department
Head
Electronics & Communication
Priyadarshini Bhagwati College of Engg
Umred Road, Nagpur.



Lokmanya Tilak Jankalyan Shikshan Sanstha's
PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING

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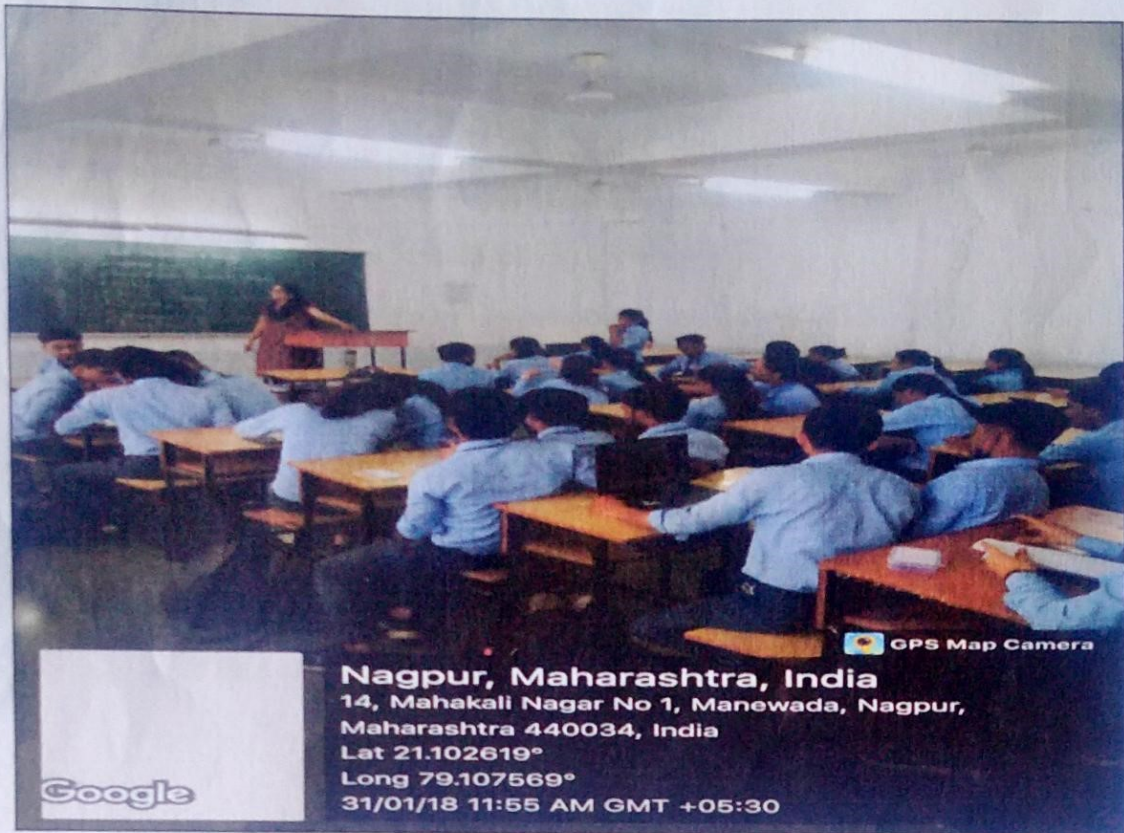
Department of Electronics & Communication Engineering
Academic session 2018-19

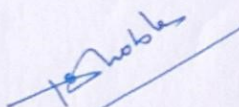
Report of Certification Course

1. Event Title : Certification Course on **"Introduction to Robotics"**.
2. Course Code : **EC181902**
3. Event Date : From 01/01/2018 onwards
4. Event conduction duration : 30 Hours
5. Event venue : Classroom + Computer Lab
6. Sem/Branch : IV & VIII Sem – Electronics and Communication Engg.
7. Event resource person : Dr. Sarita B. Dhoble
8. Name of Event Coordinator : Dr. Sarita B. Dhoble

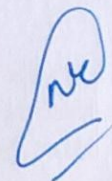
9. Objective : The objective of a certification course on "Introduction to Robotics" is to provide participants with a fundamental understanding of robotics, including the basic principles, components, and applications of robots. This course aims to familiarize participants with the field of robotics and lay the foundation for further study or practical application in robotics.

10. Outcome : By completing a certificate course on "Introduction to Robotics", participants will have a strong foundation in robotics principles and concepts. They will be prepared to pursue further studies or practical applications in robotics, such as advancing to more specialized robotics courses, participating in robotics research, or applying their knowledge in industries that utilize robotics technology.




Dr. S.B. Dhoble
Program Coordinator


Dr. D. M. Kate
Head of Department
Head
Electronics & Communication
Priyadarshini Bhagwati College of Engg
Umred Road, Nagpur.


Dr. N. K. Choudhari
Principal
Principal
Priyadarshini Bhagwati College of Engg.
Umred Road, Nagpur.



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Department of Electronic & Communication Engineering

Academic session 2018-19

NOTICE

Date: 20/02/2019

All the students of Eight semester Electronics and Communication Engineering Department are hereby informed that the department is going to organize **free Certification course on "Hands on VHDL Using Altera Quart DE II Board"**.

The interested students register their name to the undersigned faculty.

The detail content of the course :

Name of course : **Hands on VHDL using Altera Quartus DE II Board.**
Course Code : **CE181903**
Date of commencement : **28/02/2019**
Seats : **30**

Dr. (Ms.) D. M. Kate
HOD, EC Dept. PBCOE
Nagpur **Head**

Electronics & Communication
Priyadarshini Bhagwati College of Engg
Umred Road, Nagpur.

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
Academic Session 2018-19

A Certificate Course on
"Hands on VHDL using Altera Quartus DE-II Board"
CONTENTS

Sr. No.	Contents	No. of Hours
1	Introduction to VHDL, Advantages of using VHDL, Basic VHDL Syntax and Structure, Data types and operators in VHDL	3 Hours
2	Introduction to FPGA and Altera DE-II Board : FPGA architecture and functionality, Introduction to the Altera DE-II board, Overview of the altera Quartus-II software	2 Hours
3	Design Entry methods : Introduction to design entry methods in Quartus II, Schematic-based design entry, HDL based design Entry	2 Hours
4	Behavioral Modeling in VHDL : Behavioral modelling concepts, VHDL concurrent statements, Implementing combinational logic circuits, Implementing sequential logic circuits.	4 Hours
5	Structural Modeling in VHDL : Structural modelling concepts, Component instantiation, Design hierarchy and modular design, Implementing complex circuits using components	4 Hours
6	Dataflow Modeling in VHDL : Dataflow modelling concepts, Signals and variables in VHDL, Using concurrent signal assignments, Implementing arithmetical and logical operations	4 Hours
7	Introduction to VHDL Testbenches : Importance of testbenches in design verification, Creating and simulating testbenches, stimulus generation and response checking	2 Hours
8	Advanced VHDL topics : Parameterized designs and generics, Using VHDL libraries and packages, Advanced sequential and concurrent statements, Implementing finite state machines	4 Hours
9	Design Implementation and Synthesis : Design constraints and timing analysis, Synthesis and optimization using Quartus II, Generating and downloading programming files, verifying design functionality on Altera DE-II board	4 Hours
10	Final Project : Integrating various VHDL concepts learned throughout the course, Designing a complex digital circuit using Altera DE-II Board, Testing and debugging the final project	2 Hours
Total		31 Hours


Ms. D. M. Kate

Head of Department
Head

Electronics & Communication
Priyadarshini Bhagwati College of Engg.
Umred Road, Nagpur.



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Department of Electronics & Communication Engineering
Academic session 2018-19

Report of Certification Course

1. Event Title : Certification Course on "Hands on VHDL using Altera Quartus DE-II Board".
2. Course Code : EC181903
3. Event Date : From 28/02/2019 to 30/03/2019
4. Event conduction duration : 30 Hours
5. Event venue : Computer Lab (III floor)
6. Sem/Branch : Electronics and Communication Engg.
7. Event resource person : Dr. D. M. Kate
8. Name of Event Coordinator : Dr. D. M. Kate
9. Objective : The objective of a certification course on "Hands-n VHDL using Altera Quartus DE-II Board" is to provide participants with practical knowledge and skills in utilizing the VHDL hardware description language and the Altera Quartus development environment for FPGA-based system design. The course aims to equip participants with a solid understanding of VHDL fundamentals, hands-on experience with Altera DE-II development board, and the ability to design and implement digital systems using VHDL and Quartus.
10. Outcome : Upon successful completion of the certificate course, participants should be equipped with the necessary knowledge, skills and practical experience to confidently utilize VHDL and the Altera Quartus development environment for FPGA-based system design. They should be well-prepared to apply these skills in various industrial, research, and academic settings requiring digital system design and FPGA expertise.

Photograph:



Dr. D. M. Kate
Program Coordinator

Dr. D. M. Kate
Head of Department

Head
Electronics & Communication
Priyadarshini Bhagwati College of Engg.
Umred Road, Nagpur.

Dr. N. K. Choudhari
Principal

Principal
Priyadarshini Bhagwati College of Engg.
Umred Road, Nagpur.

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Mechanical Engineering Department

Fax: 0712 2710283

PBCOE/ME/2018-19/

Date: 02/03/2019


To,
Principal Sir
PBCOE, Nagpur

Subject: Request for the permission for conducting Free Enrichment certification course on "Application of Operation Research in Industry".

Respected Sir,

As per the above subject, we are conducting one month Free Enrichment certification course on "Application of Operation Research in Industry" for engineering students. The course coordinate by Prof. S.P.Daf from date 05 march to 5 april 2019 the detail of course is attached with it.

Request you to kindly accord permission for conducting one month Free Enrichment certification course on "Application of Operation Research in Industry".


Prof. S.M.Pimpalgaonkar
Head of Dept.

Permitted

NW
02/03/19

**PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING,
NAGPUR**


NOTICE

Date: 02/03/2019

All the HoD's are hereby informed that Department of Mechanical Engineering is organizing free certification Course on "Application of Operation Research in Industry". You are hereby informed to circulate the flier of course attached herewith to the students of your department. Certificate will be issued to the students after successful completion of the course.

The Details of the course and other information is attached herewith

Sr. No	Name of the Course	Date of Commencement	Venue	Seats
1	Application of Operation Research in Industry	05/03/2019	Mechanical Seminar Hall	30


Dr. N.K. Choudhari
Principal

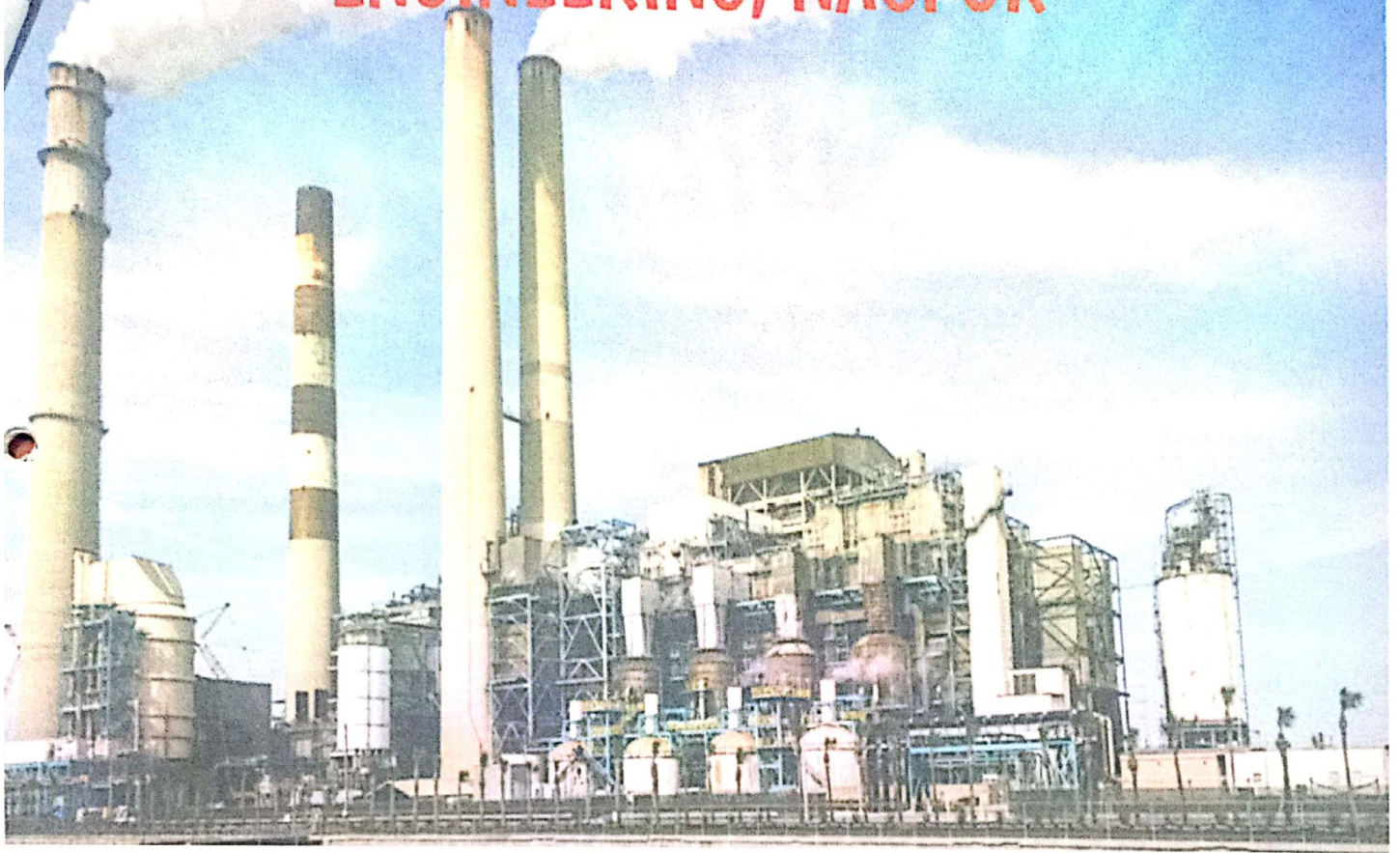
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- 1) Dean Academics
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IME/CE

Lokmanya Tilak Jankalyan Shikshan Sanstha



PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING, NAGPUR



Enrichment Free Certification Course on:

“Application of Operation Research in Industry”

5 March - 5 April 2019

Organised by:
Department of Mechanical Engineering
Priyadarshini Bhagwati College of Engineering

Enrichment Free Certification Course on
"Application of Operation Research in Industry"

Course Convener: Prof. S. M. Pimpalgaonkar

Course Coordinator: Prof. S. P. Daf

Date: 5 March – 5 April 2019

Time: 4:00 -5:00 Pm

Venue: Mechanical Department Seminar Hall.

Contact Personal: Prof. S. M. Pimpalgaonkar (9096767848)

Prof. S. P. Daf (9665087710)

Sr. no.	Day	Topic
01	Day-01	Introduction of LPP.
02	Day-02	Mathematical modeling of LPP.
03	Day-03	Application of LPP in Manufacturing.
04	Day-04	Application of LPP in Pharmacist Industry.
05	Day-05	Application of LPP in Agriculture industry.
06	Day-06	Application of LPP in Service Industry.
07	Day-07	Sensitivity Analysis.
08	Day-08	LPP by using TORA Software.
09	Day-09	Case study on LPP.
10	Day-10	Forecasting of Product.
11	Day-11	Forecasting Moving Average Technique.
12	Day-12	Forecasting Exponential Smoothing Technique.
13	Day-13	Forecasting Regression Technique.
14	Day-14	Case study on forecasting of Demand.
15	Day-15	Introduction of Decision Making Tool And Technique.
16	Day-16	Steps of Decision Making and Working Principle.
17	Day-17	Analytic hierarchy process (AHP).
18	Day-18	Analytic hierarchy process (AHP).
19	Day-19	Weighted sum model .

	Day-20	PROMETHEE.
21	Day-21	PROMETHEE.
22	Day-22	ELECTRE.
23	Day-23	ELECTRE.
24	Day-24	Fuzzy Logic Decision Making.
25	Day-25	Fuzzy Logic Decision Making.
26	Day-26	Neural Networks.
27	Day-27	Neural Networks.
28	Day-28	MCDC by using Software.
29	Day-29	Case study on Material Selection.
30	Day-30	Expert lecture on optimization.



Prof. S.M.Pimpalgaonkar

Head of Department



Lokmanya Tilak Jankalyan Shikshan Sanstha's
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Department of Mechanical Engineering
Academic session 2018-2019

NOTICE

Date: 27/04/2019

All the students of B.Tech III year are hereby inform that our department is organising a one month free certification course on "Robots & Their Applications in Mechanical Engineering" for B.E Final year students. Mr.Akshay D. Anjekar will be coordinating the course conduction. Participation certificates will be provided to all the students who registered for the same. The detailed content of the course and schedule is attached herewith the notice.

Sr.No	Name of Course	Date of Commencement	Venue
1.	"Robots & Their Applications in Mechanical Engineering"	01/05/2019	Automation in Production lab& ME Dept. Classroom

Prof. S.M. Pimpalgaonkar

HOD

Mechanical Department



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Department of Mechanical Engineering


Date: 27/04/2019


Session: 2018-19


“Robots and Their Applications in Mechanical Engineering”

Syllabus

S. N	Content	No.ofHrs
1	Introduction to robot, History of Robots, Future of Robots in world, Basic Robot Configuration, Robot Anatomy, Degree of Freedoms.	5 Hrs
2	The working principles of various sensors, industry based example of real working of robots through case study reports and videos.	5 Hrs
3	Industrial Robotics-Introduction, robot anatomy, accuracy and repeatability and other specifications, end effectors, sensors, introduction to robot programming, safety monitoring. Robot Applications	5 Hrs
4	6 axis robot and its anatomy introduction. Demonstration of 6-Axis pick and place robot with practical. Understanding the degree of freedom for the 6 Axis robots.	5 Hrs
5	Numerical Control Production Systems-Basic concepts, coordinate system and machine motion. Part programming on formation of simple jobs on CNC lathe and milling machine. Practical on CNC lathe and milling machines.	5 Hrs
6	Applications of robots in different areas like in manufacturing units, medical science, space, and others field of engineering. Introduction to use of Robots in emerging Industry 4.0 approach.	5 Hrs


Mr. Akshay D. Anjekar
Course. Coordinator


Ms. S. P. Gurway
Course. Co-Coordinator


Prof. S. M. Pimpalgaonkar
HOD, ME Dept



Lokmanya Tilak Jankalyan Shikshan Sanstha's
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Department of Mechanical Engineering

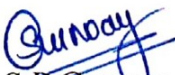
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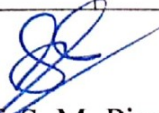
“Robots and Their Applications in Mechanical Engineering”

Course Schedule

S. N	Content	No.ofHrs	Date
1	Introduction to robot, History of Robots, Future of Robots in world, Basic Robot Configuration, Robot Anatomy, Degree of Freedoms.	5 Hrs	01/05/2019
2	The working principles of various sensors, industry based example of real working of robots through case study reports and videos.	5 Hrs	02/05/2019
3	Industrial Robotics-Introduction, robot anatomy, accuracy and repeatability and other specifications, end effectors, sensors, introduction to robot programming, safety monitoring. Robot Applications	5 Hrs	03/05/2019
4	6 axis robot and its anatomy introduction. Demonstration of 6-Axis pick and place robot with practical. Understanding the degree of freedom for the 6 Axis robots.	5 Hrs	04/05/2019
5	Numerical Control Production Systems-Basic concepts, coordinate system and machine motion. Part programming on formation of simple jobs on CNC lathe and milling machine. Practical on CNC lathe and milling machines.	5 Hrs	06/05/2019
6	Applications of robots in different areas like in manufacturing units, medical science, space, and others field of engineering. Introduction to use of Robots in emerging Industry 4.0 approach.	5 Hrs	07/05/2019


Mr. Akshay D. Anjekar
Course. Coordinator


Ms. S.P. Gurway
Course. Co-Coordinator


Prof. S. M. Pimpalgaonkar
HOD, ME Dept



Lokmanya Tilak Jankalyan Shikshan Sanstha's
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Department of Mechanical Engineering.

Academic session 2018-2019

NOTICE

Date: 23/03/2019

All the Students of Mechanical Engineering are hereby informed that our Department is organizing one-month free Certificate courses on “**Trends in Mechanical Engineering**”. Interested students can enrol their name to Prof. K.D.Ganvir on or before 27/04/2019. Certificate will be issued to the students after successful completion of the course. The detail contents of the course and other information is attached herewith.

Sr. No	Name of Course	Date of Commencement	Venue
1.	“Trends in Mechanical Engineering”	01/05/2019	MO4, 4th Floor

Mr. S.M. Pimpalgaonkar

HOD

Mechanical Department
Mechanical Engg. Dept.
Priyadarshini Bhagwati College of Engg.
Umred Road, Nagpur.



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Department of Mechanical Engineering.
Academic session 2018-2019

Syllabus

Introduction

Mechanical is the core branch of engineering finding its application in every aspect of common as well as technical life. To make aware about some important yet simple technicalities as well as applications, we have designed a certificate course on “**Trends in Mechanical Engineering**” This course includes Automation , Robotics, CAD/CAM , 3D printing technology , Production , computational fluid dynamics, Nanotechnology, smart technology , Artificial Intelligence, Internet of things . Students of all semester of Mechanical Engineering will undergo this course followed by test and evaluation and summative assessment . Grade certificate will be given to the students appearing for the assessment.

Objective of the Course:

1. To make the student aware about Trends in Mechanical Engineering.
2. To make the student aware about advancements in smart Production area , automobile area , Green manufacturing , flexible manufacturing systems.
3. To make the student aware about product Design and Manufacturing, Mechanical Engineering, Electronics Systems Engineering, Materials Engineering, Computer Science and Automation and specifically artificial intelligence.

Course Outcomes:

After completion of this Course Student will be able to:

1. Describe the concept of Trends in Mechanical Engineering and all recent technologies used in Industries.
2. Explain the concept 3D printing and smart manufacturing.
3. Explain basics of robotics.
4. Explain Artificial intelligence, machine learning, IoT .in collaboration with production.

Course Name: "Trends in Mechanical Engineering"

Sr. No	Contents	No. of Hrs.
1	Introduction to Historical context Mechanical engineering , Automisation, Robotization , 3D Printing	5
2	Introduction to General Framework used in industries , Artificial Intillegenc,Internet of things, Industrial Internet of things .	5
3	Additive Manufacturing, 3D printing technology, Augmented and Virtual Reality	5
4	Manufacturing Optimization.Rapid Tooling. Computational Fluid Dynamics. Project Management	5
5	Energy Solutions, Nano Electro-Mechanical Systems. Autonomous Vehicle. Fuel-Efficient Engine Technologies, Self Driving Cars and New Automated Transport solutions.	5
6	Agile Manufacturing,Textile Industry, Laser Cooling. Advances in Heating, Ventilation, and Air Conditioning.	5
	Total	30 hours



Prof.K.D.Ganvir

Course Coordinator



Prof. S. M. Pimpalgaonkar

HOD

Mechanical Department

Head

Mechanical Engg. Deptt.
Priyadarshini Bhagwati College of Engg
Umred Road, Nagpur.



Lokmanya Tilak Jankalyan Shikshan Sanstha's
PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING
Harpur Nagar, Umred Road (Near Bada Talbagh), Nagpur-24
(Approved by AICTE, New Delhi, Govt. of Maharashtra
and affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)
Email: principalpbcoe@gmail.com, Website: www.pbcoe.edu.in
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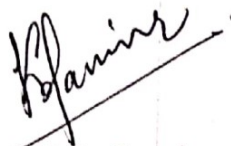


Department of Mechanical Engineering.

Academic session 2018-2019

Schedule of certification course on: "Trends in Mechanical engineering"

Sr. No	Modules	No. of Hour	Date
1	Introduction to Historical context Mechanical engineering , Automisation, Robotization , 3D Printing.	5	1/5/2019
2	Introduction to General Framework used in industries , Artificial Intillegene,Internet of things, Industrial Internet of things .	5	2/5/2019
3	Additive Manufacturing, 3D printing technology, Augmented and Virtual Reality	5	3/5/2019
4	Manufacturing Optimization,Rapid Tooling, Computational Fluid Dynamics, Project Management	5	4/5/2019
5	Energy Solutions, Nano Electro-Mechanical Systems, Autonomous Vehicle, Fuel-Efficient Engine Technologies, Self Driving Cars and New Automated Transport solutions.	5	5/5/2019
6	Agile Manufacturing,Textile Industry, Laser Cooling, Advances in Heating, Ventilation, and Air Conditioning.	5	7/5/2019
	Total	30 hours	



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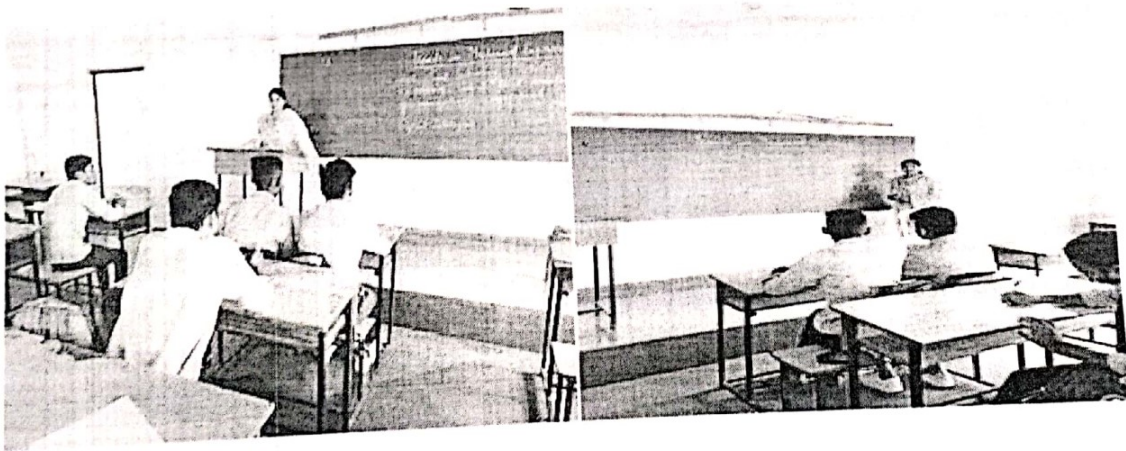



Department of Mechanical Engineering.


Academic session 2018-2019


Report on Certificate Course on "Trends in Mechanical Engineering"

1. Title of Course : Certificate course on
"Trends in Mechanical Engineering"
2. Course Code : ME181903
3. Course Date : 1/5/2019 to 7/5/2019
4. Course conduction duration : 30Hrs
5. Venue : M04 and Automation in Production lab
6. Name of Event Coordinator : Prof. K.D.Ganvir
Number of students : 65
7. Objective : To make student aware about
Recent trends in mechanical engineering.




Prof. K.D.Ganvir
Prog. Coordinator


Prof. S. M. Pimpalgaonkar
HOD, Mechanical Department
Mechanical Engg. Dept.
Priyadarshini Bhagwati College of Engg
Umred Road, Nagpur.


Dr. N. K. Choudhari
Principal
Principal
Priyadarshini Bhagwati College
Umred Road, Nagpur.



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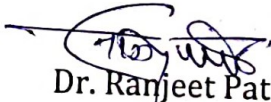


Ref. Civil / Even Sem /2018-19

Date: 18/03/2019

NOTICE

All the students are hereby informed that department is going to organised Add on/ certificate programme from 29/03/2019 on "**General Aspects In Civil Engineering**". The duration of programme is 30 Hours and the programme will be coordinate by Dr. R. N. Patil, Asst. Professor Civil Engineering Department. Students should enroll their names upto 26/03/2019
Venue - Tutorial Room, Second Floor, Civil Engineering Department
Time - 09 am to 10 am


Dr. Ranjeet Patil

HOD, Civil Engg. PBCOE

CIVIL ENGG. DEPT.
Priyadarshini Bhagwati College of Engineering
Harpur Nagar, Umred Road, Nagpur-24



Department of Civil Engineering

Academic session 2018-2019 (Even semester)


Value Added Course

On

“General Aspects In Civil Engineering”

Sr. No.	Content	No. of Hrs.
Module-I: Introduction and scope with materials		
1	Introduction to civil engineering, Branches, Scope, Impact, Role of Civil Engineer, Units of measurement, Unit conversion (Length, Area, Volume)	2
2	List of materials, Details (types, properties, uses) of materials: Cement, Aggregate, Brick, Steel, Concrete, Stone, Soil, Mortar, Timber, Plastic, Epoxy, Flyash, Steel slag, Copper slag, Bitumen, Optical fiber, Pipe, Wire, Cable, Smart material, Basic hand fill tests, FRP	4
Module-II: Charecterization and planning		
3	Water and waste water quality characteristics, drinking water standards	2
4	concept of plan of a simple residential building, Principles of planning, Elementary principles and basic requirements for building planning, elevation and section of a residential building. Principles of town planning, Necessity of town planning, Origin of town, Growth of town, Land use, Principles and objects of zoning, Advantages of zoning, Low cost housing, Prevention of slum, FSI.	6
Module-III: Building Construction and introduction to surveying		
5	Building Construction: Types of building, Components of building & its functions, types of loads acting on building, Types of brick bonds, Typical building layout, Symbols used in electrical layout, Symbols used for water supply, plumbing and sanitation. Nominal dimensions for door, window and furniture	6

	Introduction to surveying and levelling: introduction, fundamental principles, classification. Linear measurement: Instruments used, Chaining on plane ground, Offset, Ranging. Angular measurement: Compass-Instrument used Meridian, Bearing, and Local attraction. Leveling: Instrument used, Terminology, Types of leveling, and Methods of leveling, Introduction to contour Modern tools: Introduction to Theodolite, Total Station, Introduction to GPS, GIS & RS	6
Module-IV: Advances in civil engineering		
7	Advancements in civil engineering: smart city and it's features, solid waste management systems, mass transportation systems- brts, metro, rain water harvesting systems, watershed management, green building, energy efficient building, development of river fronts, heritage structures & its conservations, features of earthquake resistant structures	4
Total Hours		30


 Signature of Coordinator
 Anuja Professor
 CIVIL Engg. Deptt.
 Piyabirajni Engineering College of Engg.
 Untred Road, Nagpur.