

**2.6.1 Program specific outcome and course outcome for all program offer by the institute are stated and displayed on website and communicated to teacher and student
Upload the description of mechanism of communication**

The Program Outcomes and Program Specific Outcomes are published and disseminated through following modes:

| Sr. No. | Parameter | Page No. |
|----------------|--------------------------------------|-----------------|
| 1 | College Website/Department Home Page | 2 |
| 2 | ERP Software | 3 |
| 3 | Faculty Course File | 6 |
| 4 | Google CLassroom/Teacher's Website | 9 |
| 5 | Laboratory Manuals/WorkBook | 11 |

1. College Website/Department Homepage:

| Dissemination of Vision, Mission, POs and PSOs | | |
|---|---|---|
| Department | Vision, Mission | PO_PSO_PEO |
| Engineering Sciences and Allied Engineering | http://coewpune.bharativedyapeeth.edu/index.php/departments/department-of-engineering-sciences-and-allied-engineering#vision-mission | http://coewpune.bharativedyapeeth.edu/index.php/departments/department-of-engineering-sciences-and-allied-engineering#peos-and-psos |
| Electronics and Telecommunication | http://coewpune.bharativedyapeeth.edu/index.php/departments/electronics-and-telecommunication-engineering#vision-mission | http://coewpune.bharativedyapeeth.edu/index.php/departments/electronics-and-telecommunication-engineering#peo-pso-pos |
| Computer Engineering | http://coewpune.bharativedyapeeth.edu/index.php/departments/computer-engineering#vision-and-mission | http://coewpune.bharativedyapeeth.edu/index.php/departments/computer-engineering#peos-psos-and-pos |
| Information Technology | http://coewpune.bharativedyapeeth.edu/index.php/departments/information-technology#vision-mission | http://coewpune.bharativedyapeeth.edu/index.php/departments/information-technology#peos-psos-pos |

2. ERP Software:

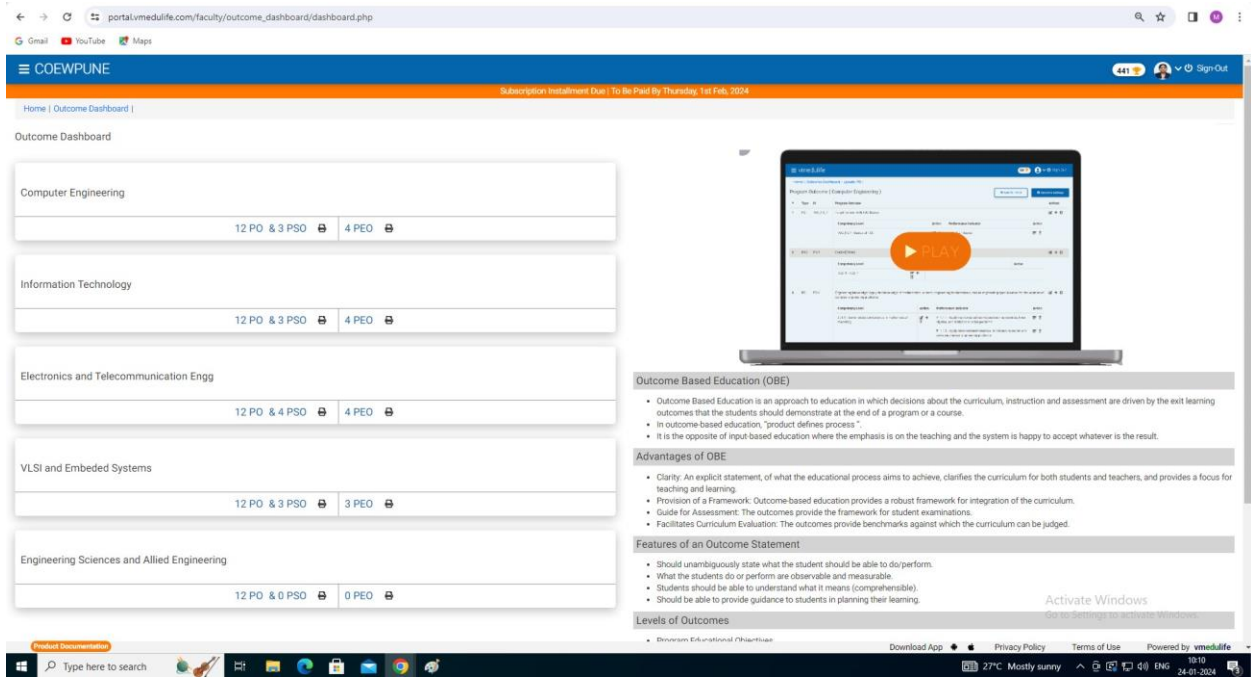


Image: ERP PO, PSO, PEO Display HomePage

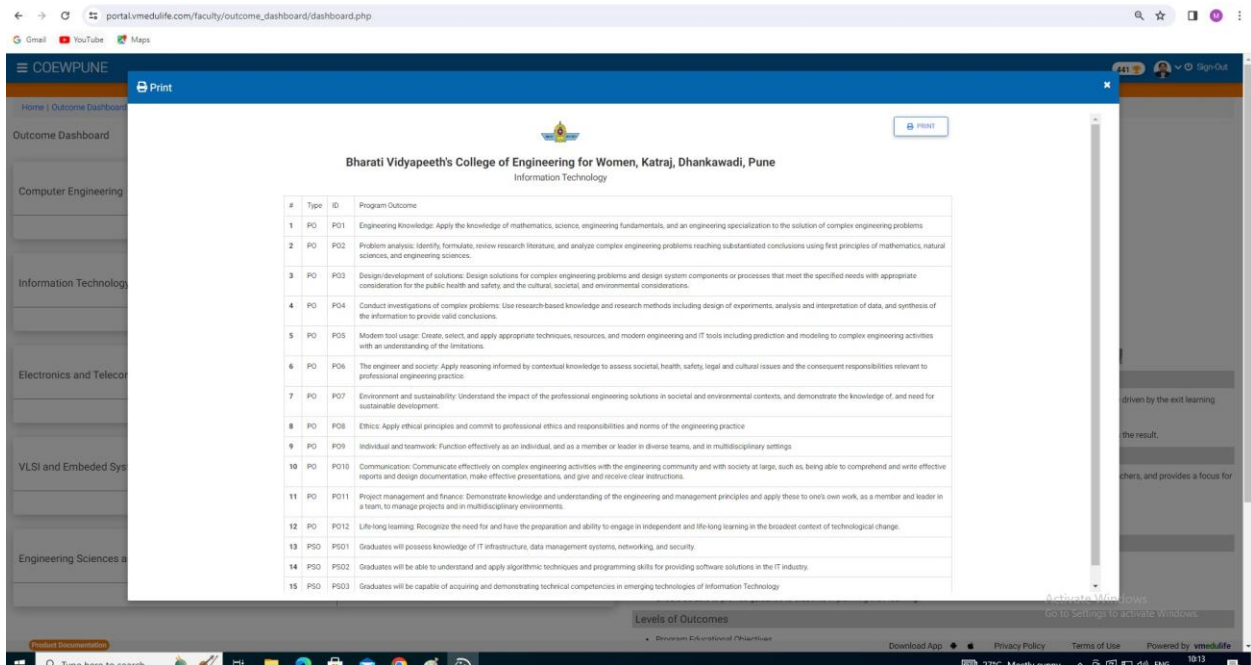


Image: IT dept. POs and PSOs

portalvmedulife.com/faculty/outcome_dashboard/dashboard.php

COEWPUNE

Print

Bharati Vidyapeeth's College of Engineering for Women, Katraj, Dhankawadi, Pune
Information Technology

| # | Type | ID | Program Educational Objective |
|---|------|------|---|
| 1 | PEO | PEO1 | The students of the Information Technology Program after passing out will: Possess adequate knowledge and skills in mathematics, science, and engineering to employ these skills in their chosen fields of specialization. |
| 2 | PEO | PEO2 | The students of the Information Technology Program after passing out will: Possess the ability to solve problems through technical competency in the field of Information Technology. |
| 3 | PEO | PEO3 | The students of the Information Technology Program after passing out will: Possess professional competence through life-long learning such as higher studies, registrations to professional bodies, and other professional activities in the field of Information Technology. |
| 4 | PEO | PEO4 | The students of the Information Technology Program after passing out will: Work ethically and morally in a multidisciplinary workplace as well as independently in a global, societal, and environmental context. |

Levels of Outcomes

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Image: IT dept. PEOs

4. Faculty Course File

BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING FOR WOMEN,
PUNE-SATARA RD., PUNE – 411043
Department of Information Technology
Academic Year 2018-19 (Semester I)

| | | | |
|------------------|--------------------------------|---------------------|----------|
| Subject: | Information and Cyber Security | Examination Scheme: | |
| Course Code: | 2015 Course | | |
| Class: | 414453 | | |
| | Final Year Engineering | | |
| Teaching Scheme: | | Theory Insem: | 30 Marks |
| Lectures: | 3 Hrs./week | Theory Endsem: | 70 Marks |

Course Objectives:

1. Understand the fundamentals of information security services.
2. Apply modular arithmetic concepts to security algorithms.
3. To study security issues in internet protocols.
4. To study network defense tools
5. Learn global perspective of Cybercrime and related laws to identify methods for cybercrime.
6. To learn forensics and investigations tools.


Course Outcomes:


After successful completion of this course the student will be able to

| | |
|----------|---|
| 414453.1 | Match security mechanisms with security services |
| 414453.2 | Solve the basic cryptographic techniques: symmetric and asymmetric algorithm examples |
| 414453.3 | Identify network related security threats |
| 414453.4 | Explain issues in risk management |
| 414453.5 | Identify cybercrime and classify crimes according to it's legal perspective |
| 414453.6 | Use computer forensic tools. |

Course Attainment methods:

1. Theory Class/Unit Test
2. Examples
3. Tutorials/ Assignments


Prof. Ms. M. A. Rane
Course Teacher


Prof. Dr. D. A. Godse
HOD IT



Principal

Image: Sample CO attached to File

Bharati Vidyapeeth's College of Engg. for Women, Pune-Satara Rd. Pune-411043

| Course File | |
|--------------------|---|
| Sr. No. | Information and Cyber Security |
| 01 | Syllabus (University Syllabus Structure, Course Objectives, Course Outcomes and Course Attainment Methods) |
| 02 | Notes-PPTS/Transparencies/Hand written/e books/etc |
| 03 | Beyond Syllabus (Syllabus gaps) |
| 04 | Lab Experiments/Assignment (Curriculum and Beyond Curriculum) |
| 05 | Results (Theory & Practical) (Last two years University and institute result for the course. UT/Prelim/Mock OR/Mock PR/MCQ Results) |
| 06 | Unit Test/Prelim question papers with solutions and Sample Answer Sheets |
| 07 | University Question Papers and Model Answers |
| 08 | Unit wise Question bank (Theory, Practical/Assignment/Experiment/Tutorial wise oral question bank, MCQs bank for online examination) |
| 09 | Feedback (Course and General Faculty Feedback) |
| 10 | GATE/IES etc syllabus related to subjects taught |
| 11 | Action Plans (Compensatory/Remedial classe's/Expert lecture/ Guest Lecture) |
| 12 | CO-PO Attainment |

Mugdhane
Prof. Mugdha A. Rane

Documents to be presented along with Course File:

1. Attendance Record Book
2. Sample Journals
3. Sample Assignments
4. Unit Test sample answer sheets

Dept. of Information Technology

Image: Sample Content of Course File

BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING FOR WOMEN

PUNE-SATARA RD., PUNE - 411043

Department of Computer Engineering

Academic Year 2018-19 (Semester II)

| | | | |
|---------------------------------|-------------------------|----------------------------|----------|
| Subject: | Advanced data structure | Examination Scheme: | |
| Course Code: | 210252 | | |
| Class: | SE Comp | | |
| Teaching Scheme: | | Theory Online | 50 Marks |
| Lectures: | 4 Hrs/Week | Theory End-Sem. | 50 Marks |
| Tutorial/ Practical /OR: | 4 Hrs/Week | Term work: | 25 Marks |
| | | Practical: | 50 Marks |

Course Objectives:

1. To learn and understand basics of binary tree and operations that can be performed on binary tree.
2. To understand basic concepts of graphs and use of graph and algorithms that can be applied on graphs.
3. To learn different terms related to hashing and to understand different hashing techniques.
4. To understand concepts of symbol table with help of example.
5. To learn indexing techniques and different types of search tree.
6. To learn different file organization and primitive operations that can be applied on it.

Course Outcomes:

After successful completion of this course the student will be able to

| | |
|----------|---|
| 210252.1 | Define terms such as complete binary tree, full binary tree, skewed tree and identify traversals on binary tree. |
| 210252.2 | Define terms such as weighted graphs, subgraph, complete graph etc. and apply algorithm for finding minimum distance. |
| 210252.3 | Describe hashing functions and to apply proper hashing technique for given problem. |
| 210252.4 | Apply technique of optimal binary search tree to reduce searching time. |
| 210252.5 | Explain indexing techniques and to prepare B tree or B+ tree for given data. |

| | |
|----------|--|
| 210252.6 | Explain different types of file organization and its operations. |
|----------|--|

Course Attainment methods:

1. Theory Class/Unit Test
2. Attendance in the theory classes
3. Tutorials/ Assignments
4. Orals for Term Work Submission

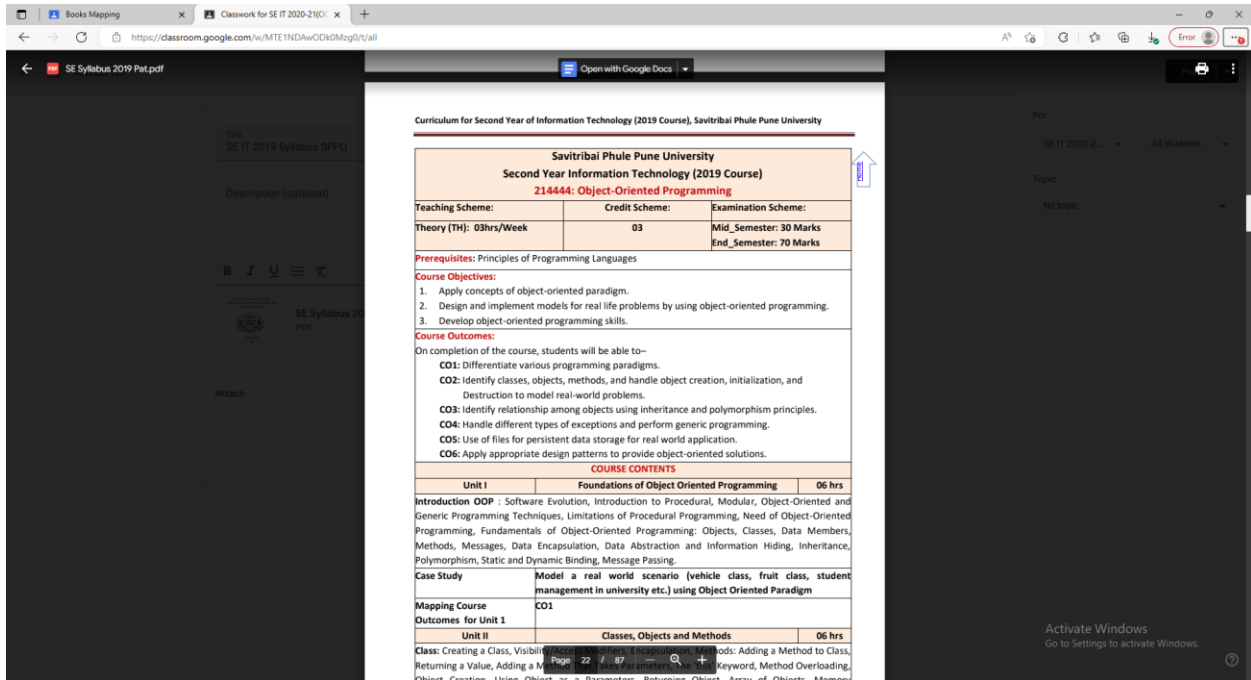
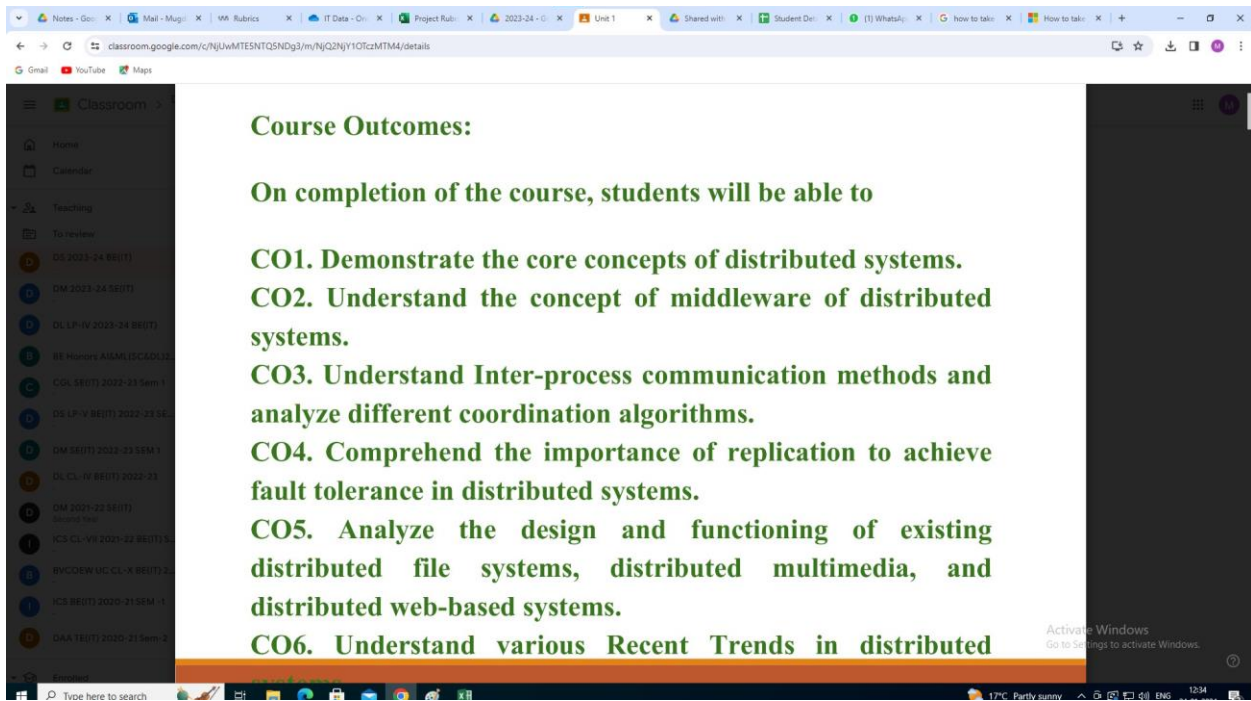


Prof.K.S.Warke
Subject Teacher


HOD

Image: Sample CO attached to File

6. Google Classroom/Teacher's Website:



Images: Google Classroom CO Display

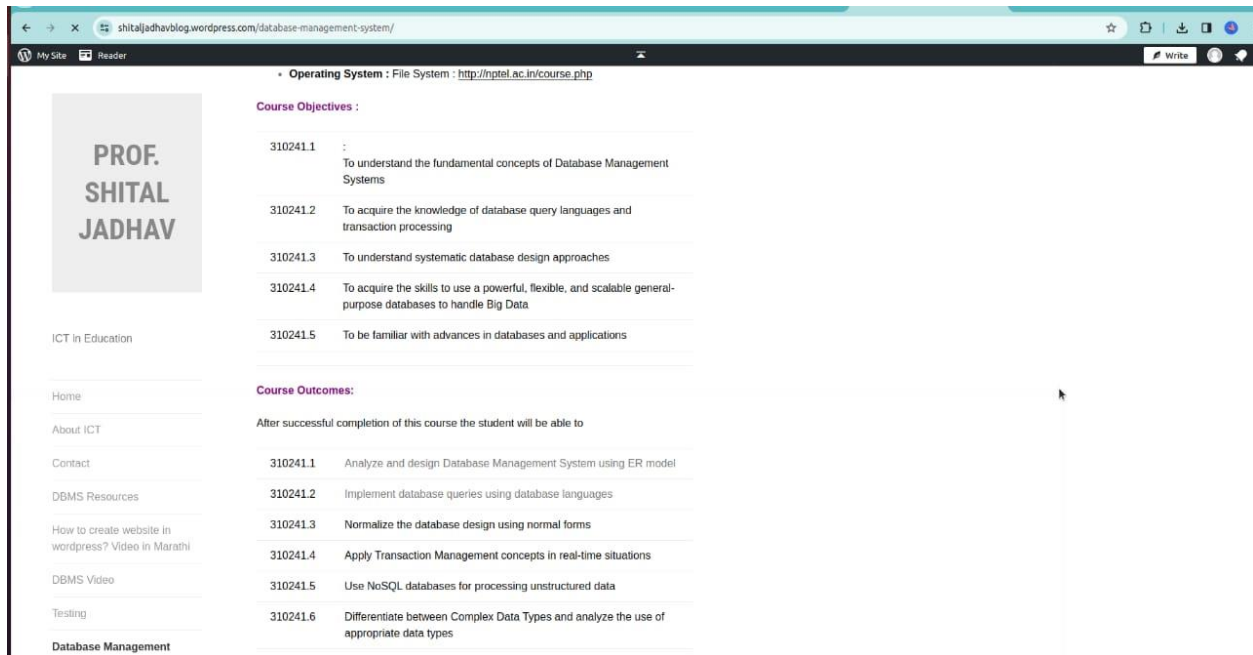


Image: CO Display on Teacher's Website

5. Laboratory Manuals & Workbook



Bharati Vidyapeeth's College of Engineering for Women
Computer Engineering
Class: T.E. Computer Engineering
Subject: Database Management System Lab (310247)
2015 Pattern

Practical: 4Hrs/Week

Term work: 25 Marks

Practical: 50 Marks

Semester I

DBMS LAB MANUAL

Prepared by:- Prof.Shital B. Jadhav

About Savitribai Phule Pune University

Savitribai Phule Pune University, one of the premier universities in India, is positioned in the North-western part of Pune city. It occupies an area of about 411 acres. It was established on 10th February, 1949 under the Poona University Act. The university houses 46 academic departments. It is popularly known as the 'Oxford of the East'. It has about 307 recognized research institutes and 612 affiliated colleges offering graduate and under-graduate courses. The university attracts many foreign students due to its excellent facilities. It offers good accommodation facility. There is a provision of hostel for the students. There is a well-stocked library containing plenty of books regarding various subjects. The university offers different scholarships to the students. The university conducts seminars and conferences for the students.

About College

Bharati Vidyapeeth's College of Engineering for Women was established in June 2000, with the collective efforts of experts having long and outstanding academic experience in the field of professional education with the mission 'Social transformation through dynamic education.'

Vision:

Women Empowerment through Technical Education.

Mission:

- Develop women students to rise to their full potential.
- Impart knowledge and prepare competent engineers.

About Course

A **database-management system (DBMS)** is a computer-software application that interacts with end-users, other applications, and the database itself to capture and analyze data. A general-purpose DBMS allows the definition, creation, querying, update, and administration of databases. A database is generally stored in a DBMS-specific format which is not portable, but different DBMSs can share data by using standards such as SQL and ODBC or JDBC.

Computer scientists may classify database-management systems according to the database models that they support. Relational databases became dominant in the 1980s. These model data as rows and columns in a series of tables, and the vast majority use SQL for writing and querying data. In the 2000s, non-relational databases became popular, referred to as NoSQL because they use different query languages.

Bharati Vidyapeeth's College of Engineering for Women, Pune

| Course : Database Management System Laboratory | | | | | | | | | | | | | | | |
|--|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|----------------------------------|------|------|
| Vision: | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> • Pioneers in women computer engineering by providing competent technical knowledge and enriched social awareness. | | | | | | | | | | | | | | | |
| Mission: | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> • To inculcate quality education in various domains of Computer Engineering. • Encourage students, to showcase their talents and search the community needs. • To improve technical competency to provide value added training. | | | | | | | | | | | | | | | |
| (PEOs) Programme Educational Objectives : [New] | | | | | | | | | | | | | | | |
| <ol style="list-style-type: none"> 1. To prepare a graduate to implement strong fundamental domain knowledge to solve engineering problems with modern tools and technology. 2. To prepare a graduate to work as a committed professional demonstrating strong ethical practices with understanding of social responsibilities for betterment of society. 3. To prepare a motivated graduate by inculcating multidisciplinary thinking through research attitude and life long learning. 4. To prepare graduates with strong communication and leadership skills to work effectively as an individual as well as in teams. | | | | | | | | | | | | | | | |
| | Program Outcomes | | | | | | | | | | | | Program Specific Outcomes | | |
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
| 1. Design E-R Model for given requirements | - | 1 | 3 | - | 3 | 1 | 1 | 1 | 3 | 1 | - | 1 | 2 | 1 | 1 |
| 2. Use fundamental database techniques such as Create, Modify and Delete | - | 1 | 2 | - | 2 | 1 | - | 1 | 3 | - | - | 2 | 2 | 2 | 2 |
| 3. Use advanced database techniques such as Trigger ,Cursor and PL/SQL. | - | 1 | 2 | - | 2 | - | - | - | 3 | 2 | 1 | - | 1 | 2 | 1 |
| 4. Use of CRUD operations on unstructured databases such as MongoDB. | - | 1 | 2 | - | 2 | - | 2 | - | 3 | 1 | - | 1 | 2 | 1 | 2 |
| 5. Develop the ability to handle databases of varying complexities | 2 | 2 | 3 | - | 3 | 1 | - | | 3 | - | 2 | 1 | 3 | 3 | 3 |

" Social Transformation Through Dynamic Education "



BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING FOR WOMEN

Affiliated to Savitribai Phule Pune University
Pune - Satara Road, Pune - 411 043.



PROJECT WORKBOOK

Academic Year : 20 - 20

Term : I / II

| | |
|---------------------|--|
| Department : | BE [Computer Engineering] |
| Group Id : | 20 |
| Name : | Ratshanda Borse, Kajal Gadekar, Ankita Tilekar, Anuradha Biraj'Dar, |
| Guide Name : | Prof. A.P. Kadam |



Project Work Book (Guidelines and Log)

Course Code: 410248 & 410256

(2019 Course)

Fourth Year of Computer Engineering

Year 2022 - 2023

| | |
|---|--|
| Group/ProjectID | 20 |
| Project Title | EcRD : Edge Cloud Computing Framework For Smart Road Damage Detect |
| Group members | 1. Kajal D. Gadekar (3218) 2. Ankita C. Tilekar (3250) 3. Rakshanda Borse (3253) 4. Anuradha Birajdar. (3273) |
| Project Guide | Prof. A.P. Kadam |
|  |  |
| Computer Engineering Bharati Vidyapeeth's College of Engineering for Women, Pune-43 Savitribai Phule Pune University | |

**Savitribai Phule Pune University
Computer Engineering**

Program Educational Objectives

- PEO1.** To prepare globally competent graduates having strong fundamentals, domain knowledge, updated with modern technology to provide the effective solutions for engineering problems.
- PEO2.** To prepare the graduates to work as a committed professional with strong professional ethics and values, sense of responsibilities, understanding of legal, safety, health, societal, cultural and environmental issues.
- PEO3.** To prepare committed and motivated graduates with research attitude, lifelong learning, investigative approach, and multidisciplinary thinking.
- PEO4.** To prepare the graduates with strong managerial and communication skills to work effectively as an individual as well as in teams.

Program Outcomes

Students are expected to know and be able -

- PO1.** To apply knowledge of mathematics, science, engineering fundamentals, problem solving skills, algorithmic analysis and mathematical modeling to the solution of complex engineering problems.
- PO2.** To analyze the problem by finding its domain and applying domain specific skills
- PO3.** To understand the design issues of the product/software and develop effective solutions with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
- PO4.** To find solutions of complex problems by conducting investigations applying suitable techniques.
- PO5.** To adapt the usage of modern tools and recent software.
- PO6.** To contribute towards the society by understanding the impact of Engineering on global aspect.
- PO7.** To understand environment issues and design a sustainable system.
- PO8.** To understand and follow professional ethics.
- PO9.** To function effectively as an individual and as member or leader in diverse teams and interdisciplinary settings.
- PO10.** To demonstrate effective communication at various levels.
- PO11.** To apply the knowledge of Computer Engineering for development of projects, and its finance and management.
- PO12.** To keep in touch with current technologies and inculcate the practice of lifelong learning.

Program Specific Outcomes (PSO)

A graduate of the Computer Engineering Program will demonstrate-

- PSO1: Professional Skills-**The ability to understand, analyze and develop computer programs in the areas related to algorithms, system software, multimedia, web design, big data analytics, and networking for efficient design of computer-based systems of varying.
- PSO2: Problem-Solving Skills-** The ability to apply standard practices and strategies in software project development using open-ended programming environments to deliver a quality product for business success.
- PSO3: Successful Career and Entrepreneurship-** The ability to employ modern computer languages, environments, and platforms in creating innovative career paths to be an entrepreneur, and a zest for higher studies.