Master of Engineering - ME (Embedded Systems)

Course Name : Database Programming in Java Lab

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Course Code : ESD 5183

Academic Year : 2024 - 25

Semester : I

Name of the Course Coordinator : Dr. SATHYENDRANATH MALLI

Name of the Program Coordinator : Dr. DINESH RAO

Course File

Signature of Program Coordinator Signature of Course Coordinator

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with Date with Date

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Program Education Objectives (PEOs)

The overall objectives of the Learning Outcomes-based Curriculum Framework (LOCF) for **ME (Embedded Systems)**, program are as follows.

PEO No.	Education Objective
PEO 1	Enable to draw upon fundamental and advanced knowledge to apply analytical and computational approaches to solve technological problems in embedded systems..
PEO 2	Introduce state of art technologies in the area of embedded systems and inculcate ethical practices to make industry-ready professionals.
PEO 3	Promote scientific and societal advancement through research and entrepreneurship.

Program Outcomes (POs)

By the end of the postgraduate program in **ME (Embedded Systems)**, graduates will be able to:

PO1	An ability to independently carry out research /investigation and development work to solve practical problems.
PO2	An ability to write and present a substantial technical report/document.
PO3	Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.
PO4	Ability to develop and implement embedded systems requirements based on theoretical principles and practical knowledge.
PO5	Ability to demonstrate knowledge of the underlying principles and evaluation methods for analyzing and decision-making.

1. Course Plan

1.1 Primary Information

Course Name : Database Programming in Java Lab[ESD 5183]

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L-T-P-C : 0-0-3-1

Contact Hours : 36 Hours

Pre-requisite : Basic Programming Knowledge

Core/ PE/OE : Elective - 1

1.2 Course Outcomes (COs)

CO At the end of this course, the student should be able to: No. of Contact Hours Program Outcomes (PO's) BL

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CO1 Apply object-oriented programming concepts for a java 12 PO3 3

application

CO2 Use core java concepts to build a java application 12 PO3, PO5 3

CO3 Implement a java application using JDBC concepts. 6 PO4 3

Analyze the different set of SQL statements which are

CO4 used for defining, constructing, and manipulating a database 6 PO4, PO5 4

1.3 Assessment Plan

Components Lab Test Flexible Assessments End semester/ Makeup

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(2 - 3 in number) examination

Duration 120 minutes To be decided by the faculty. 180 minutes

Weightage 0.3 0.2 0.5

Typology of Applying; Applying; Analyzing. Applying; Analyzing;

questions Analyzing. Evaluating. Assignment: Apply, analyze Evaluating.

Answer all the and evaluate all the applications covering all the topics of OOP's,

core java, JDBC and Database:

questions. Answer all the questions.

Pattern Maximum marks Maximum 20 marks. Maximum marks 50.

[To be decided by the faculty

30. members.

May be Assignments, Problem

solving, etc.]

Schedule As per academic Assignment submission: As per academic calendar.

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calendar. November 2023

Topics covered OOP's concepts, Core java, UI

Comprehensive examination

application, JDBC, covering the full syllabus.

and SQL

1.4 Lesson Plan

L. No. TOPICS Course Outcome Addressed

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L0 Course delivery plan, Course assessment plan, Course outcomes, Program outcomes, CO-PO mapping, reference books ---

L1 Setting the java runtime environment, understanding a simple java application CO1

L2 Exercises to build the java applications using core java concepts CO2

L3 Exercises to build the java applications using core java concepts CO2

L4 Exercises to build the java applications using core java concepts CO2

L5 Inheritance - Build & test java applications CO1

L6 Interface - Build & test java applications CO1

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IT1 CO1 & CO2

L7 UI application - Build & test CO2

L8 UI application - Build & test CO2

L9 JDBC application CO3

L10 JDBC application CO3

L11 Test various SQL statements CO4

L12 Test various SQL statements CO4

IT2 CO3 & CO4

1.5 References

- 1. "JAVA 2 The Complete Reference" Patrick Naughton and Herbert Schildt -VII Edition, Tata McGraw Hill.

- 2. "Database Programming with JDBC and Java" George Reese, O'Reilly, 2nd Edition

- 3. "Fundamentals of Database systems, Third Edition". Author: Elmasri and Navath

- 4. "Database system Concepts, Third Edition",Author: Abraham Silberschatz (Bell Laboratories), Henry F. Korth(Bell Laboratories) and S. Sudarshan (Indian Institute of Technology, Bombay, Publishers: The McGraw-Hill Companies, Inc.

1.6 Other Resources (Online, Text, Multimedia, etc.)

- 1. Web Resources: Blog, Online tools and cloud resources.

- 2. Journal Articles.

1.7 Course Timetable

1 st Semester Big Data Analytics Lab:

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9-10 10-11 11-12 12-1 1-2 2-3 3-4 4-5

MON

TUE DBPJ Lab

WED

THU

FRI

SAT

1.8 Assessment Plan

Cos Marks & weightage

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CO No. CO Name Mid Semester (Max. 50) Assignment (Max. 20) End Semester (Max. 50) CO wise Weightage

CO1 Apply object-oriented programming concepts for a java application 20 5 10 0.3

CO2 Use core java concepts to build a java application 20 5 20 0.3

CO3 Implement a java application using JDBC concepts. 10 5 10 0.2

CO4 Analyze the different set of SQL statements which are used for defining, constructing, and manipulating a database 5 10 0.2

Marks (weightage) 0.3 0.2 0.5 1.0

Note:

- In-semester Assessment is considered as the Internal Assessment (IA) in this course for 50 marks, which includes the performances in lab participation, assignment work, lab work, lab tests, quizzes etc.

- End-semester examination (ESE) for this course is conducted for a maximum of 50.

- End-semester marks for a maximum of 50 and IA marks for a maximum of 50 are added for a maximum of 100 marks to decide upon the grade in this course.

Weightage for CO1 = (Lab Test marks for CO1 + Assignment marks for CO1 + ESE marks for CO1) /100

1.9 Assessment Details

The assessment tools to be used for the Current Academic Year (CAY) are as follows:

SI. No.	Tools	Weightage	Frequency	Details of Measurement (Weightage/Rubrics/Duration, etc.)
1	Lab Test	0.3	- 1	Performance is measured using internal test attainment level. - Reference: question paper and answer scheme. - Each internal test is assessed for a maximum of 50 marks and scaled down to 40 marks.
2	Assignments	0.2	2 -	Performance is measured using assignments/quiz attainment level. - Assignments/quiz are evaluated for a maximum of 10 marks.
3	ESE	0.5	- 1	Performance is measured using ESE attainment level. - Reference: question paper and answer scheme. - ESE is assessed for a maximum of 100 marks and scaled down to 50 marks.

1.10 Course Articulation Matrix

CO	PO1	PO2	PO3	PO4	PO5
CO1	Y				
CO2	Y	Y			
CO3	Y				
CO4	Y	Y			
Average Articulation Level	*	*	*		

