



# SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY

(AUTONOMOUS)  
Accredited by National Board of Accreditation, AICTE, New Delhi, Accredited by  
NAAC with "A" Grade - 3.32 CGPA Recognized under 2(f) & 12(B) of UGC Act 1956  
Approved by AICTE, New Delhi, Permanent Affiliation to JNTUH, Kakinada  
Seetharamapuram, W.G. DT., Narsapur-534280, (Andhra Pradesh)

## DEPARTMENT OF INFORMATION TECHNOLOGY

### TEACHING PLAN

| Course Code | Course Title                             | Semester | Branch | Contact Periods /Week | Academic Year | Date of commencement of Semester |
|-------------|------------------------------------------|----------|--------|-----------------------|---------------|----------------------------------|
| 23IT3T03    | OBJECT ORIENTED PROGRAMMING THROUGH JAVA | III      | CSE -  | 6                     | 2024-2025     | 30-07-2024                       |

### COURSE OUTCOMES

|   |                                                                                         |
|---|-----------------------------------------------------------------------------------------|
| 1 | Identify the concepts of OOPs through Java programming. (K3)                            |
| 2 | Discover Classes objects and methods. (K4)                                              |
| 3 | Apply the inheritance and Interfaces in Java.(K3)                                       |
| 4 | Illustrate the concepts of Exception handling and I/O concepts in file operations. (K2) |
| 5 | Classify the concepts and usage of JDBC and java FX GUI framework. (K2)                 |

| UNIT | Out Comes / Bloom's Level | Topics No. | Topics/ Activity                                                                                                                                                                                                                                    | Text Book/ Reference | Contact Hour | Delivery Method                                                 |
|------|---------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------|-----------------------------------------------------------------|
| I    | CO - 1                    | 1.1        | Basic concepts, Principles Program Structure in Java: Introduction, Writing Simple Java Programs, Elements or Tokens in Java Programs, Java Statements Command Line Arguments, User Input to Programs, Escape Sequences Comments, Programming Style | T2                   | 1            | Chalk & Board<br>Power point presentation<br>Assignment<br>Test |
|      |                           | 1.2        | Introduction, Data Types in Java, Declaration of Variables                                                                                                                                                                                          | T2                   | 1            |                                                                 |
|      |                           | 1.3        | Data Types, Type Casting, Scope of Variable                                                                                                                                                                                                         | T2                   | 1            |                                                                 |
|      |                           | 1.4        | Identifier, Literal Constants, Symbolic Constants                                                                                                                                                                                                   | T2, T1               | 1            |                                                                 |
|      |                           | 1.5        | Formatted Output with printf() Method, Static Variables and Methods, Attribute Final                                                                                                                                                                | T2, T1               | 1            |                                                                 |
|      |                           | 1.6        | Precedence and Associativity of Operators, Assignment Operator (=), Basic Arithmetic Operators                                                                                                                                                      | T2, T1               | 1            |                                                                 |
|      |                           | 1.7        | Increment (++ and Decrement (- -) Operators, Ternary Operator, Relational Operators                                                                                                                                                                 | T2, T1               | 1            |                                                                 |
|      |                           | 1.8        | Introduction, if Expression, Nested if Expressions, if-else Expressions                                                                                                                                                                             | T2, T1               | 1            |                                                                 |
|      |                           | 1.9        | Introduction, if Expression, Nested if Expressions, if-else Expressions                                                                                                                                                                             | T2, T1               | 1            |                                                                 |
|      |                           | 1.10       | Introduction, if Expression, Nested if Expressions, if-else Expressions                                                                                                                                                                             | T2, T1               | 1            |                                                                 |
|      |                           | 1.11       | Ternary Operator?, Switch Statement,                                                                                                                                                                                                                | T2, T1               | 1            |                                                                 |

[illegible]



|      |                                                                                                 |        |   |  |  |
|------|-------------------------------------------------------------------------------------------------|--------|---|--|--|
| 3.7  | Application of Keyword Super, Constructor Method and Inheritance,                               | TI, T2 | 1 |  |  |
| 3.8  | Method Overriding, Dynamic Method Dispatch, Abstract Classes, Interfaces and Inheritance        | TI, T2 | 2 |  |  |
| 3.9  | Declaration of Interface, Implementation of Interface,                                          | TI, T2 | 1 |  |  |
| 3.10 | Multiple Interfaces, Nested Interfaces, Inheritance of Interfaces                               | TI, T2 | 1 |  |  |
| 3.11 | Default Methods in Interfaces, Static Methods in Interface, Functional Interfaces, Annotations, | TI, T2 | 2 |  |  |

|       |        |      |                                                                                                                   |       |   |               |                          |            |      |   |    |   |
|-------|--------|------|-------------------------------------------------------------------------------------------------------------------|-------|---|---------------|--------------------------|------------|------|---|----|---|
| IV    | CO - 4 | 4.1  | Introduction, Defining Package, Importing Packages and Classes into Programs, Path and Class Path                 | TI    | 1 | Chalk & Board | Power point presentation | Assignment | Test | 1 | TI | 1 |
|       |        | 4.2  | Access Control, Packages in Java SE, Java.lang Package and its Classes                                            | TI    | 1 |               |                          |            |      | 1 |    |   |
|       |        | 4.3  | Class Object, Enumeration, class Math, Wrapper Classes                                                            | TI    | 1 |               |                          |            |      | 1 |    |   |
|       |        | 4.4  | Auto-boxing and Auto-unboxing, Java util Classes and Interfaces                                                   | TI    | 2 |               |                          |            |      | 2 |    |   |
|       |        | 4.5  | Formatter Class, Random Class, Time Package                                                                       | TI    | 1 |               |                          |            |      | 1 |    |   |
|       |        | 4.6  | Class Instant (java.time.Instant), Formatting for Date/Time in Java, Temporal Adjusters Class                     | TI    | 2 |               |                          |            |      | 2 |    |   |
|       |        | 4.7  | Temporal Adjusters Class, Hierarchy of Standard Exception Classes, Keywords throws and throw                      | TI,T2 | 1 |               |                          |            |      | 1 |    |   |
|       |        | 4.8  | try, catch, and finally Blocks, Multiple Catch Clauses, Class Throwable, Unchecked Exceptions, Checked Exceptions | TI,T2 | 1 |               |                          |            |      | 1 |    |   |
|       |        | 4.9  | Java I/O API, standard I/O streams, types, Byte streams                                                           | TI,T2 | 2 |               |                          |            |      | 2 |    |   |
|       |        | 4.10 | Character streams, Scanner class, Files in Java                                                                   | TI,T2 | 1 |               |                          |            |      | 1 |    |   |
| Total |        |      |                                                                                                                   |       |   |               |                          |            |      |   | 13 |   |

Chalk  
&  
Board  
Power point  
presentation

Chalk  
&  
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presentation  
Assignment  
Test

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| Content beyond syllabus | S.No. | AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION             | CUMULATIVE PROPOSED PERIODS |       |    |
|-------------------------|-------|--------------------------------------------------------------------------|-----------------------------|-------|----|
|                         |       |                                                                          | TI,RI                       | Total | 65 |
| Assignment<br>Test      | 5.4   | Thread Priority-Synchronization, Inter-thread Communication - Suspending | TI,RI                       | 1     | 1  |
|                         | 5.5   | Resuming, and Stopping of Threads, JDBC Architecture                     | TI,RI                       | 1     | 1  |
|                         | 5.6   | Installing MySQL and MySQL Connector/J, JDBC Environment Setup,          | TI,RI                       | 2     | 2  |
|                         | 5.7   | Establishing JDBC Database Connections, ResultSet Interface,             | TI,RI                       | 2     | 2  |
|                         | 5.8   | Java FX Scene Builder, Java FX App Window Structure                      | TI,RI                       | 1     | 1  |
|                         | 5.9   | displaying text and image, event handling                                | TI,RI                       | 1     | 1  |
|                         | 5.10  | laying out nodes in scene graph, mouse events                            | TI,RI                       | 1     | 1  |
|                         |       |                                                                          | TI,RI                       | 13    | 13 |
|                         |       |                                                                          | Total                       | 13    | 65 |
|                         |       |                                                                          | CUMULATIVE PROPOSED PERIODS | 65    | 65 |

## Text Books:

| S.No. | AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION                                                  |
|-------|---------------------------------------------------------------------------------------------------------------|
| 1     | Anitha Seth, B.L.Juneja, JAVA one step ahead, Oxford.                                                         |
| 2     | Debasis Samanta, Monalisa Sarma, Joy with JAVA, Fundamentals of Object Oriented Programming, Cambridge, 2023. |
| 3     | Paul Deitel, Harvey Deitel, JAVA 9 for Programmers, 4th Edition, Pearson.                                     |

## Reference Books:

| S.No. | AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION         |
|-------|----------------------------------------------------------------------|
| 1     | Herbert Schildt, The complete Reference Java, 11th edition, TMH      |
| 2     | Daniel Liang, Introduction to Java programming, 7th Edition, Pearson |

## Web Details:

|   |                                                                                                                                                     |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <a href="https://www.geeksforgeeks.org/java-programming-examples/">https://www.geeksforgeeks.org/java-programming-examples/</a>                     |
| 2 | <a href="https://www.brainkart.com/subject/The-Complete-Reference-Java_171/">https://www.brainkart.com/subject/The-Complete-Reference-Java_171/</a> |
| 3 | <a href="https://www.tutorialspoint.com/cryptography">https://www.tutorialspoint.com/cryptography</a>                                               |

| Name                       | Signature with Date |
|----------------------------|---------------------|
| i. Faculty                 | Mr. K.Bhannu Chand  |
| ii. Module Coordinator     | Mr. K Raja          |
| iii. Programme Coordinator | Dr. RVSV Prasad     |

Principal