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| **CSE 203 Object Oriented Programming Language – course outline** | | |
| **Classes** | **Details** | **Comments** |
| Class 1 | Objective, Course Outlines and other rules, Introduction to OOP |  |
| Class 2 | OOP principles, Introduction to Java, Java Features, JVM |  |
| Class 3 | Writing simple Java program, compilation and running, keywords, Data types |  |
| Class 4 | Data types (review), Literals, Expression, Statements |  |
| Class 5 | Java Operators, type casting, auto type casting, Array Basics |  |
| Class 6 | Java Control Statements |  |
| Class 7 | Class test # 1 and discussion after exam |  |
| Class 8 | Java Classes, member variables, constructor, method, passing different types of parameters, static keyword |  |
| Class 9 | Java Classes- method and constructor overloading, access control specification, Abstract class |  |
| Class 10 | Array, String Handling Basic, Variable Length Arguments |  |
| Class 11 | Review Class |  |
| Class 12 | Midterm |  |
| Class 13 | Inheritance, Object Class |  |
| Class 14 | Packages, Interfaces |  |
| Class 15 | String Handling – Advance |  |
| Class 16 | Exception Handling |  |
| Class 17 | Java I/O and File Handling |  |
| Class 18 | Review on Java I/O and File handling |  |
| Class 19 | Class test # 2 and discussion after exam |  |
| Class 20 | Enumerations, Wrapper classes, auto boxing and un-boxing |  |
| Class 21 | Multithreading |  |
| Class 22 | Discussion on Assignments |  |
| Class 23 | Review Class -1 |  |
| Class 24 | Review Class-2 |  |
| Class 25 | Java Collection Framework\* | \*Depends upon students’ interest and class availability |
| Class 26 | Java Generics\* | \*Depends upon students’ interest and class availability |

Final exam syllabus includes “Class”

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| **CSE 204 Object Oriented Programming Language Sessional – course outline** | | |
| **Classes** | **Details** | **Comments** |
| Class 1 | Writing simple programs and compile |  |
| Class 2 | Writing programs using different control statements |  |
| Class 3 | Java with OOP concepts, method/constructor overloading |  |
| Class 4 | Using JOptionDialogue, Scanner, String Class |  |
| Class 5 | Introduction to GUI programming |  |
| Class 6 | GUI programming – more |  |
| Class 7 | Midterm |  |
| Class 8 | Assignment presentation |  |
| Class 9 | Java Applet |  |
| Class 10 | Java I/O and File Handling |  |
| Class 11 | Review Class |  |
| Class 12 | Final |  |

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| **CSE 103 Structured Programming Language – course outline** | | |
| **Classes** | **Details** | **Comments** |
| Class 1, 2 | Structured Programming Concept, Flowchart, Pseudo-code basics |  |
| Class 3 | Introduction to C, C features, Keywords, Data types |  |
| Class 4 | Data Types (review), C literals, Expression, Statements, Type casting, Symbolic Constant |  |
| Class 5 | Operators (Arithmetic, relational, logical, unary) |  |
| Class 6, 7 | Common I/O functions – getchar(), putchar(), gets(), puts(), scanf(), printf() – formatting details |  |
| Class 8 | Control Statements (if-else, switch, for, while, do-while) |  |
| Class 9 | Control Statements (break, continue, goto) and review |  |
| Class 10 | Class Test # 1 and discussion |  |
| Class 11 | C Function basics, parameters |  |
| Class 12 | C Functions – recursion, common library functions |  |
| Class 13 | Review Class |  |
| Class 14 | Midterm |  |
| Class 15 | C Storage Structure (global, auto, static, register) |  |
| Class 16 | Array basics (1D and 2D), Arrays as function parameter |  |
| Class 17 | Pointers basics, pointer operations |  |
| Class 18 | Pointers - Dynamic memory allocation |  |
| Class 19 | Function revisit (call by value, call by reference) |  |
| Class 20 | Structure |  |
| Class 21 | Structure (review), Union, user defined data types |  |
| Class 22 | Data Files (formatted) |  |
| Class 23 | Data Files (unformatted), Discussion on common library functions |  |
| Class 24 | Macros, Enumeration |  |
| Class 25 | Review class |  |
| Class 26 | Final review class with assignment questions |  |
| Extra | Bitwise operation, command line arguments\* | \*Depends upon students’ interest and class availability |
| Extra | Data Files (random access functions)\* | \*Depends upon students’ interest and class availability |

Final exam syllabus includes “Functions”

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| **CSE 104 Structured Programming Language Sessional – course outline** | | |
| **Classes** | **Details** | **Comments** |
| Class 1 | Writing simple programs, compilation – basic outputs |  |
| Class 2 | Basic I/O related programs, Discussion on Assignments |  |
| Class 3 | Control Statement (if-else, switch) related programs |  |
| Class 4 | Loop and String related programs |  |
| Class 5 | Functions, Array related programs |  |
| Class 6 | Review programs |  |
| Class 7 | Midterm |  |
| Class 8 | Assignment Presentation |  |
| Class 9 | Storage types, array, pointer related problems |  |
| Class 10 | Data files related programs |  |
| Class 11 | Data file, structure/union related programs and final discussions |  |
| Class 12 | Final |  |
| Class 13 |  |  |

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| **CSE 306 Database Systems Sessional – course outline** | | |
| **Classes** | **Details** | **Comments** |
| Class 1 | Relational Database basics, Table basics, Normalization |  |
| Class 2 | MySQL basics, introducing XAMPP/WAMP, phpMyAdmin (a GUI MySQL application) |  |
| Class 3 | SQL commands – DDL, DCL, Relationship, Assignment distribution |  |
| Class 4 | SQL commands – DML, MySQL Datatypes |  |
| Class 5 | PHP basics |  |
| Class 6 | Discussion on Assignments, Review class |  |
| Class 7 | Midterm |  |
| Class 8 | Assignment Presentation |  |
| Class 9 | Triggers, Functions, Stored Procedures |  |
| Class 10 | Transaction, DB connectors |  |
| Class 11 | Final Assignment submission and discussion |  |
| Class 12 | Final Exam/ Review class\* | \*if available |
| Class 13 | Final Exam |  |

A full Database application will be created step by step as a case study in the class room