

Computer Science: Object-Oriented Programming I

Design, develop, compile, debug, test, run and document programs. OOP1-1

1. Design, develop, compile, debug, test, run and document programs. OOP1-1

Demonstrate knowledge of the program development life cycle. OOP1-2

2. Demonstrate knowledge of the program development life cycle. OOP1-2

Design and develop programs using operators and assignments. OOP1-3

3. Design and develop programs using operators and assignments. OOP1-3

Design and develop programs using primitive data types. OOP1-4

4. Design and develop programs using primitive data types. OOP1-4

Design and develop programs using a variety of data types. OOP1-5

5. Design and develop programs using a variety of data types. OOP1-5

Design and develop programs using sequences, selection, and repetition structures OOP1-6

6. Design and develop programs using sequences, selection, and repetition structures OOP1-6

Design and develop programs using single and multi-dimensional arrays. OOP1-7

7. Design and develop programs using single and multi-dimensional arrays. OOP1-7

Design and develop programs using arrays,

8. Design and develop programs using arrays, lists and tuples. OOP1-8

lists and tuples. OOP1-8

Utilize arrays OOP1-9

9. Utilize arrays OOP1-9

Design and develop programs using effective error and exception handling. OOP1-10

10. Design and develop programs using effective error and exception handling. OOP1-10

Design and develop programs using object-oriented programming features, including defining classes, instantiating objects, using arrays of objects OOP1-11

11. Design and develop programs using object-oriented programming features, including defining classes, instantiating objects, using arrays of objects OOP1-11

Design and develop programs implementing user-defined methods and modular programming. OOP1-12

12. Design and develop programs implementing user-defined methods and modular programming. OOP1-12

Explain how algorithms are used to produce artificial intelligences (AI). OOP1-13

13. Explain how algorithms are used to produce artificial intelligences (AI). OOP1-13

Design and develop programs using method overloading. OOP1-14

14. Design and develop programs using method overloading. OOP1-14

Design and develop programs using inheritance, encapsulation, and polymorphism. OOP1-15

15. Design and develop programs using inheritance, encapsulation, and polymorphism. OOP1-15

Design and develop programs using simple GUI components. OOP1-16

16. Design and develop programs using simple GUI components. OOP1-16

Evaluate and critique effectiveness and

17. Evaluate and critique effectiveness and efficiency of code. OOP1-17

**efficiency of
code.** OOP1-17