

# Computer Science: Object-Oriented Programming I

Design, develop, compile, debug, test, run and document programs. 00P1-1

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1. Design, develop, compile, debug, test, run and document programs. 00P1-1

Demonstrate knowledge of the program development life cycle. 00P1-2

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2. Demonstrate knowledge of the program development life cycle. 00P1-2

Design and develop programs using operators and assignments. 00P1-3

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3. Design and develop programs using operators and assignments. 00P1-3

Design and develop programs using primitive data types. 00P1-4

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4. Design and develop programs using primitive data types. 00P1-4

Design and develop programs using a variety of data types. 00P1-5

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5. Design and develop programs using a variety of data types. 00P1-5

Design and develop programs using sequences, selection, and repetition structures 00P1-6

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6. Design and develop programs using sequences, selection, and repetition structures 00P1-6

Design and develop programs using single and multi-dimensional arrays. 00P1-7

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7. Design and develop programs using single and multi-dimensional arrays. 00P1-7

Design and develop programs using arrays,

8. Design and develop programs using arrays, lists and tuples. 00P1-8

lists and tuples. OOP1-8

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Utilize arrays OOP1-9

9. Utilize arrays OOP1-9

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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

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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

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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

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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

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Design and develop programs using method overloading. OOP1-14

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

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

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

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

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

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Evaluate and critique effectiveness and

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

**efficiency of  
code.** OOP1-17