

Computer Science: Computational Thinking

Demonstrate an understanding of elementary logic, truth tables, Boolean algebra **CT1**

1 Demonstrate an understanding of elementary logic, truth tables, Boolean algebra **CT1**

Demonstrate programming style best practices. **CT2**

2 Demonstrate programming style best practices. **CT2**

Illustrate the flow of a program. **CT3**

3 Illustrate the flow of a program. **CT3**

Illustrate concepts using one or more programming languages. **CT4**

4 Illustrate concepts using one or more programming languages. **CT4**

Explain the implications of file processing. **CT5**

5 Explain the implications of file processing. **CT5**

Describe the steps addressed in the design of a program to solve the state problem. **CT6**

6 Describe the steps addressed in the design of a program to solve the state problem. **CT6**

Explain how algorithms are used to produce artificial intelligences (AI) **CT7**

7 Explain how algorithms are used to produce artificial intelligences (AI) **CT7**

Describe the principles of object-oriented programming. **CT8**

8 Describe the principles of object-oriented programming. **CT8**

Develop algorithms with increasing degree of complexity using structured programming techniques such as: sequence, selection, and repetition CT9

9 Develop algorithms with increasing degree of complexity using structured programming techniques such as: sequence, selection, and repetition CT9

Use fundamental data types and data structures such as: integers, reals, characters, strings, Booleans, and one- and two-dimensional arrays CT10

10 Use fundamental data types and data structures such as: integers, reals, characters, strings, Booleans, and one- and two-dimensional arrays CT10

Analyze the binary representation of data. CT11

11 Analyze the binary representation of data. CT11

Use modular programming. CT12

12 Use modular programming. CT12