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| **COURSE INTRODUCTION:**  Computer technology skills are vital to business; they permeate the entire workplace. Familiarity with computer programming is required in a growing number of firms and occupations primarily because of the increasingly widespread use of computerized management information systems.  This course focuses on converting problems into detailed plans, writing code into computer language, testing, monitoring, debugging, documenting and maintaining computer programs. Students will also design programs for specific uses. |

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| **UNIT DESCRIPTION: Students will learn to create efficient, object-oriented programs.** | | | **SUGGESTED UNIT TIMELINE: ?? WEEKS**  **CLASS PERIOD (min.): ?? MINUTES** | | | | | |
| **ESSENTIAL QUESTIONS:**   1. What is the benefit of consistency and simplicity? 2. What is the benefit of Object-Oriented programming? 3. Why do you need to identify your user? | | | | | | | | |
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| **ESSENTIAL MEASURABLE LEARNING OBJECTIVES** | | **CCSS LEARNING GOALS (Anchor Standards/Clusters)** | | **CROSSWALK TO STANDARDS** | | | | |
| **GLEs/CLEs** | **PS** | **CCSS** | **OTHER** | **DOK** |
| 1. Discuss considerations in programming for efficiency (e.g., computer time, programmer time, etc.) | |  | |  |  | **RI.11-12.1**  **RI.11-12.2**  **RI.11-12.3**  **RI.11-12.4**  **RI.11-12.5**  **RI.11-12.6**  **RI.11-12.7**  **RI.11-12.10**  **W.11-12.1**  **W.11-12.2**  **W.11-12.4**  **W.11-12.5**  **W.11-12.6**  **W.11-12.7**  **W.11-12.8**  **W.11-12.9**  **W.11-12.10**  **SL.11-12.1**  **SL.11-12.2**  **SL.11-12.3**  **SL.11-12.4**  **SL.11-12.5**  **SL.11-12.6**  **L.11-12.1**  **L.11-12.2**  **L.11-12.3**  **L.11-12.4**  **L.11-12.5**  **L.11-12.6**  **RST.11-12.1**  **RST.11-12.2**  **RST.11-12.3**  **RST.11-12.4**  **RST.11-12.5**  **RST.11-12.6**  **RST.11-12.7**  **RST.11-12.8**  **RST.11-12.9**  **RST.11-12.10**  **WHST.11-12.1**  **WHST.11-12.2**  **WHST.11-12.4**  **WHST.11-12.5**  **WHST.11-12.6**  **WHST.11-12.7**  **WHST.11-12.8**  **WHST.11-12.9** | **IT-X.1**  **IT-X.2**  **IT-X.3**  **IT-X.4**  **COMM-I.A.1**  **COMM-I.A.2**  **COMM-I.A.3**  **COMM-I.A.4**  **COMM-I.B.1**  **COMM-I.B.2**  **COMM-I.B.3**  **COMM-I.B.4**  **COMM-I.C.1**  **COMM-I.C.2**  **COMM-I.C.3**  **COMM-I.C.4**  **COMM-I.D.1**  **COMM-I.D.2**  **COMM-I.D.3**  **COMM-I.D.4**  **COMM-III.E.3**  **COMM-IV.1**  **COMM-IV.2**  **COMM-IV.3**  **COMM-IV.4** | **3** |
| 1. Discuss how to create a user-friendly program | |  | |  |  | **RI.11-12.1**  **RI.11-12.2**  **RI.11-12.3**  **RI.11-12.4**  **RI.11-12.5**  **RI.11-12.6**  **RI.11-12.7**  **RI.11-12.10**  **W.11-12.1**  **W.11-12.2**  **W.11-12.4**  **W.11-12.5**  **W.11-12.6**  **W.11-12.7**  **W.11-12.8**  **W.11-12.9**  **W.11-12.10**  **SL.11-12.1**  **SL.11-12.2**  **SL.11-12.3**  **SL.11-12.4**  **SL.11-12.5**  **SL.11-12.6**  **L.11-12.1**  **L.11-12.2**  **L.11-12.3**  **L.11-12.4**  **L.11-12.5**  **L.11-12.6**  **RST.11-12.1**  **RST.11-12.2**  **RST.11-12.3**  **RST.11-12.4**  **RST.11-12.5**  **RST.11-12.6**  **RST.11-12.7**  **RST.11-12.8**  **RST.11-12.9**  **RST.11-12.10**  **WHST.11-12.1**  **WHST.11-12.2**  **WHST.11-12.4**  **WHST.11-12.5**  **WHST.11-12.6**  **WHST.11-12.7**  **WHST.11-12.8**  **WHST.11-12.9** | **IT-X.3**  **IT-X.4**  **IT-XI.2**  **IT-XI.3**  **IT-XI.4**  **IT-XVI.1**  **IT-XVI.2**  **IT-XVI.3**  **IT-XVI.4**  **IT-VII.1**  **IT-VII.2**  **IT-VII.3**  **IT-VII.4**  **IT-XIV.1**  **IT-XIV.2**  **IT-XIII.1**  **IT-XIII.2**  **IT-XIII.3**  **IT-XIII.4**  **COMP-I.1**  **COMP-II.1**  **COMP-II.2**  **COMP-III.1**  **COMP-III.2**  **COMP-IV.1**  **COMP-IV.2**  **COMP-IV.3**  **COMP-V.2**  **COMP-V.3**  **COMP-V.4**  **COMP-VI-A.3**  **COMP-VI-A.4**  **COMP-VI-B.1**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3**  **COMM-I.A.1**  **COMM-I.A.2**  **COMM-I.A.3**  **COMM-I.A.4**  **COMM-I.B.1**  **COMM-I.B.2**  **COMM-I.B.3**  **COMM-I.B.4**  **COMM-I.C.1**  **COMM-I.C.2**  **COMM-I.C.3**  **COMM-I.C.4**  **COMM-I.D.1**  **COMM-I.D.2**  **COMM-I.D.3**  **COMM-I.D.4**  **COMM-III.E.3**  **COMM-IV.1**  **COMM-IV.2**  **COMM-IV.3**  **COMM-IV.4** | **3** |
| 1. Describe event-driven programming | |  | |  |  | **RI.11-12.1**  **RI.11-12.2**  **RI.11-12.3**  **RI.11-12.4**  **RI.11-12.5**  **RI.11-12.6**  **RI.11-12.7**  **RI.11-12.10**  **W.11-12.1**  **W.11-12.2**  **W.11-12.4**  **W.11-12.5**  **W.11-12.6**  **W.11-12.7**  **W.11-12.8**  **W.11-12.9**  **W.11-12.10**  **SL.11-12.1**  **SL.11-12.2**  **SL.11-12.3**  **SL.11-12.4**  **SL.11-12.5**  **SL.11-12.6**  **L.11-12.1**  **L.11-12.2**  **L.11-12.3**  **L.11-12.4**  **L.11-12.5**  **L.11-12.6**  **RST.11-12.1**  **RST.11-12.2**  **RST.11-12.3**  **RST.11-12.4**  **RST.11-12.5**  **RST.11-12.6**  **RST.11-12.7**  **RST.11-12.8**  **RST.11-12.9**  **RST.11-12.10**  **WHST.11-12.1**  **WHST.11-12.2**  **WHST.11-12.4**  **WHST.11-12.5**  **WHST.11-12.6**  **WHST.11-12.7**  **WHST.11-12.8**  **WHST.11-12.9** | **IT-X.3**  **IT-X.4**  **IT-XI.2**  **IT-XI.3**  **IT-XI.4**  **IT-XVI.1**  **IT-XVI.2**  **IT-XVI.3**  **IT-XVI.4**  **IT-XIV.1**  **IT-XIV.2**  **IT-XIII.1**  **IT-XIII.2**  **IT-XIII.3**  **IT-XIII.4**  **COMP-I.1**  **COMP-II.1**  **COMP-II.2**  **COMP-III.1**  **COMP-III.2**  **COMP-IV.1**  **COMP-IV.2**  **COMP-IV.3**  **COMP-V.2**  **COMP-V.3**  **COMP-V.4**  **COMP-VI-A.3**  **COMP-VI-A.4**  **COMP-VI-B.1**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3**  **COMM-I.A.1**  **COMM-I.A.2**  **COMM-I.A.3**  **COMM-I.A.4**  **COMM-I.B.1**  **COMM-I.B.2**  **COMM-I.B.3**  **COMM-I.B.4**  **COMM-I.C.1**  **COMM-I.C.2**  **COMM-I.C.3**  **COMM-I.C.4**  **COMM-I.D.1**  **COMM-I.D.2**  **COMM-I.D.3**  **COMM-I.D.4**  **COMM-III.E.3**  **COMM-IV.1**  **COMM-IV.2**  **COMM-IV.3**  **COMM-IV.4** | **1** |
| 1. Describe error catching/handling | |  | |  |  | **RI.11-12.1**  **RI.11-12.2**  **RI.11-12.3**  **RI.11-12.4**  **RI.11-12.5**  **RI.11-12.6**  **RI.11-12.7**  **RI.11-12.10**  **W.11-12.1**  **W.11-12.2**  **W.11-12.4**  **W.11-12.5**  **W.11-12.6**  **W.11-12.7**  **W.11-12.8**  **W.11-12.9**  **W.11-12.10**  **SL.11-12.1**  **SL.11-12.2**  **SL.11-12.3**  **SL.11-12.4**  **SL.11-12.5**  **SL.11-12.6**  **L.11-12.1**  **L.11-12.2**  **L.11-12.3**  **L.11-12.4**  **L.11-12.5**  **L.11-12.6**  **RST.11-12.1**  **RST.11-12.2**  **RST.11-12.3**  **RST.11-12.4**  **RST.11-12.5**  **RST.11-12.6**  **RST.11-12.7**  **RST.11-12.8**  **RST.11-12.9**  **RST.11-12.10**  **WHST.11-12.1**  **WHST.11-12.2**  **WHST.11-12.4**  **WHST.11-12.5**  **WHST.11-12.6**  **WHST.11-12.7**  **WHST.11-12.8**  **WHST.11-12.9** | **IT-X.3**  **IT-X.4**  **IT-XI.2**  **IT-XI.3**  **IT-XI.4**  **IT-XVI.1**  **IT-XVI.2**  **IT-XVI.3**  **IT-XVI.4**  **IT-XIV.1**  **IT-XIV.2**  **IT-XIII.1**  **IT-XIII.2**  **IT-XIII.3**  **IT-XIII.4**  **COMP-I.1**  **COMP-II.1**  **COMP-II.2**  **COMP-III.1**  **COMP-III.2**  **COMP-IV.1**  **COMP-IV.2**  **COMP-IV.3**  **COMP-V.2**  **COMP-V.3**  **COMP-V.4**  **COMP-VI-A.3**  **COMP-VI-A.4**  **COMP-VI-B.1**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3**  **COMM-I.A.1**  **COMM-I.A.2**  **COMM-I.A.3**  **COMM-I.A.4**  **COMM-I.B.1**  **COMM-I.B.2**  **COMM-I.B.3**  **COMM-I.B.4**  **COMM-I.C.1**  **COMM-I.C.2**  **COMM-I.C.3**  **COMM-I.C.4**  **COMM-I.D.1**  **COMM-I.D.2**  **COMM-I.D.3**  **COMM-I.D.4**  **COMM-III.E.3**  **COMM-IV.1**  **COMM-IV.2**  **COMM-IV.3**  **COMM-IV.4** | **1** |
| 1. Compare object-oriented programming with structured programming | |  | |  |  | **RI.11-12.1**  **RI.11-12.2**  **RI.11-12.3**  **RI.11-12.4**  **RI.11-12.5**  **RI.11-12.6**  **RI.11-12.7**  **RI.11-12.10**  **W.11-12.1**  **W.11-12.2**  **W.11-12.4**  **W.11-12.5**  **W.11-12.6**  **W.11-12.7**  **W.11-12.8**  **W.11-12.9**  **W.11-12.10**  **SL.11-12.1**  **SL.11-12.2**  **SL.11-12.3**  **SL.11-12.4**  **SL.11-12.5**  **SL.11-12.6**  **L.11-12.1**  **L.11-12.2**  **L.11-12.3**  **L.11-12.4**  **L.11-12.5**  **L.11-12.6**  **RST.11-12.1**  **RST.11-12.2**  **RST.11-12.3**  **RST.11-12.4**  **RST.11-12.5**  **RST.11-12.6**  **RST.11-12.7**  **RST.11-12.8**  **RST.11-12.9**  **RST.11-12.10**  **WHST.11-12.1**  **WHST.11-12.2**  **WHST.11-12.4**  **WHST.11-12.5**  **WHST.11-12.6**  **WHST.11-12.7**  **WHST.11-12.8**  **WHST.11-12.9** | **IT-X.3**  **IT-X.4**  **IT-XI.2**  **IT-XI.3**  **IT-XI.4**  **IT-XVI.1**  **IT-XVI.2**  **IT-XVI.3**  **IT-XVI.4**  **IT-XIV.1**  **IT-XIV.2**  **IT-XIII.1**  **IT-XIII.2**  **IT-XIII.3**  **IT-XIII.4**  **COMP-I.1**  **COMP-II.1**  **COMP-II.2**  **COMP-III.1**  **COMP-III.2**  **COMP-IV.1**  **COMP-IV.2**  **COMP-IV.3**  **COMP-V.2**  **COMP-V.3**  **COMP-V.4**  **COMP-VI-A.3**  **COMP-VI-A.4**  **COMP-VI-B.1**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3**  **COMM-I.A.1**  **COMM-I.A.2**  **COMM-I.A.3**  **COMM-I.A.4**  **COMM-I.B.1**  **COMM-I.B.2**  **COMM-I.B.3**  **COMM-I.B.4**  **COMM-I.C.1**  **COMM-I.C.2**  **COMM-I.C.3**  **COMM-I.C.4**  **COMM-I.D.1**  **COMM-I.D.2**  **COMM-I.D.3**  **COMM-I.D.4**  **COMM-III.E.3**  **COMM-IV.1**  **COMM-IV.2**  **COMM-IV.3**  **COMM-IV.4** | **3** |
| 1. Describe and/or practice mobile application programming | |  | |  |  | **RI.11-12.1**  **RI.11-12.2**  **RI.11-12.3**  **RI.11-12.4**  **RI.11-12.5**  **RI.11-12.6**  **RI.11-12.7**  **RI.11-12.10**  **W.11-12.1**  **W.11-12.2**  **W.11-12.4**  **W.11-12.5**  **W.11-12.6**  **W.11-12.7**  **W.11-12.8**  **W.11-12.9**  **W.11-12.10**  **SL.11-12.1**  **SL.11-12.2**  **SL.11-12.3**  **SL.11-12.4**  **SL.11-12.5**  **SL.11-12.6**  **L.11-12.1**  **L.11-12.2**  **L.11-12.3**  **L.11-12.4**  **L.11-12.5**  **L.11-12.6**  **RST.11-12.1**  **RST.11-12.2**  **RST.11-12.3**  **RST.11-12.4**  **RST.11-12.5**  **RST.11-12.6**  **RST.11-12.7**  **RST.11-12.8**  **RST.11-12.9**  **RST.11-12.10**  **WHST.11-12.1**  **WHST.11-12.2**  **WHST.11-12.4**  **WHST.11-12.5**  **WHST.11-12.6**  **WHST.11-12.7**  **WHST.11-12.8**  **WHST.11-12.9** | **IT-X.3**  **IT-X.4**  **IT-XI.2**  **IT-XI.3**  **IT-XI.4**  **IT-XVI.1**  **IT-XVI.2**  **IT-XVI.3**  **IT-XVI.4**  **IT-XIV.1**  **IT-XIV.2**  **IT-XIII.1**  **IT-XIII.2**  **IT-XIII.3**  **IT-XIII.4**  **COMP-I.1**  **COMP-II.1**  **COMP-II.2**  **COMP-III.1**  **COMP-III.2**  **COMP-IV.1**  **COMP-IV.2**  **COMP-IV.3**  **COMP-V.2**  **COMP-V.3**  **COMP-V.4**  **COMP-VI-A.3**  **COMP-VI-A.4**  **COMP-VI-B.1**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3**  **COMM-I.A.1**  **COMM-I.A.2**  **COMM-I.A.3**  **COMM-I.A.4**  **COMM-I.B.1**  **COMM-I.B.2**  **COMM-I.B.3**  **COMM-I.B.4**  **COMM-I.C.1**  **COMM-I.C.2**  **COMM-I.C.3**  **COMM-I.C.4**  **COMM-I.D.1**  **COMM-I.D.2**  **COMM-I.D.3**  **COMM-I.D.4**  **COMM-III.E.3**  **COMM-IV.1**  **COMM-IV.2**  **COMM-IV.3**  **COMM-IV.4** | **3** |
| 1. Discuss handicap accessibility considerations in programming | |  | |  |  | **RI.11-12.1**  **RI.11-12.2**  **RI.11-12.3**  **RI.11-12.4**  **RI.11-12.5**  **RI.11-12.6**  **RI.11-12.7**  **RI.11-12.10**  **W.11-12.1**  **W.11-12.2**  **W.11-12.4**  **W.11-12.5**  **W.11-12.6**  **W.11-12.7**  **W.11-12.8**  **W.11-12.9**  **W.11-12.10**  **SL.11-12.1**  **SL.11-12.2**  **SL.11-12.3**  **SL.11-12.4**  **SL.11-12.5**  **SL.11-12.6**  **L.11-12.1**  **L.11-12.2**  **L.11-12.3**  **L.11-12.4**  **L.11-12.5**  **L.11-12.6**  **RST.11-12.1**  **RST.11-12.2**  **RST.11-12.3**  **RST.11-12.4**  **RST.11-12.5**  **RST.11-12.6**  **RST.11-12.7**  **RST.11-12.8**  **RST.11-12.9**  **RST.11-12.10**  **WHST.11-12.1**  **WHST.11-12.2**  **WHST.11-12.4**  **WHST.11-12.5**  **WHST.11-12.6**  **WHST.11-12.7**  **WHST.11-12.8**  **WHST.11-12.9** | **IT-IV.1**  **IT-IV.2**  **IT-IV.3**  **IT-IV.4**  **IT-X.3**  **IT-X.4**  **IT-XI.2**  **IT-XI.3**  **IT-XI.4**  **IT-XVI.1**  **IT-XVI.2**  **IT-XVI.3**  **IT-XVI.4**  **IT-XIV.1**  **IT-XIV.2**  **IT-XIII.1**  **IT-XIII.2**  **IT-XIII.3**  **IT-XIII.4**  **IT-XV.1**  **IT-XV.2**  **IT-XV.3**  **IT-XV.4**  **COMM-I.A.1**  **COMM-I.A.2**  **COMM-I.A.3**  **COMM-I.A.4**  **COMM-I.B.1**  **COMM-I.B.2**  **COMM-I.B.3**  **COMM-I.B.4**  **COMM-I.C.1**  **COMM-I.C.2**  **COMM-I.C.3**  **COMM-I.C.4**  **COMM-I.D.1**  **COMM-I.D.2**  **COMM-I.D.3**  **COMM-I.D.4**  **COMM-III.E.3**  **COMM-IV.1**  **COMM-IV.2**  **COMM-IV.3**  **COMM-IV.4** | **3** |
| 1. Create a program using multimedia | |  | |  |  | **S-ID.8**  **S-MD.5**  **S-MD.6**  **S-MD.7**  **S-MD.8**  **G-SRT.8**  **G-GPE.7**  **G-GMD.3**  **G-MG.2**  **F-BF.1**  **F-BF.2**  **A-SSE.4**  **A-APR.1**  **A-APR.6**  **A-CED.1**  **A-CED.4**  **A-REI.1**  **A-REI.2**  **A-REI.3**  **A-REI.4**  **RST.11-12.1**  **RST.11-12.2**  **RST.11-12.3**  **RST.11-12.4**  **RST.11-12.5**  **RST.11-12.6**  **RST.11-12.7**  **RST.11-12.8**  **RST.11-12.9**  **RST.11-12.10** | **IT-VI.1**  **IT-VI.2**  **IT-VI.3**  **IT-VI.4**  **IT-X.3**  **IT-X.4**  **IT-XI.2**  **IT-XI.3**  **IT-XI.4**  **IT-XVI.1**  **IT-XVI.2**  **IT-XVI.3**  **IT-XVI.4**  **IT-XIV.1**  **IT-XIV.2**  **IT-XIII.1**  **IT-XIII.2**  **IT-XIII.3**  **IT-XIII.4**  **COMP-I.1**  **COMP-II.1**  **COMP-II.2**  **COMP-III.1**  **COMP-III.2**  **COMP-IV.1**  **COMP-IV.2**  **COMP-IV.3**  **COMP-V.2**  **COMP-V.3**  **COMP-V.4**  **COMP-VI-A.3**  **COMP-VI-A.4**  **COMP-VI-B.1**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3** | **4** |
| 1. Practice programming for efficiency | |  | |  |  | **S-ID.8**  **S-MD.5**  **S-MD.6**  **S-MD.7**  **S-MD.8**  **G-SRT.8**  **G-GPE.7**  **G-GMD.3**  **G-MG.2**  **F-BF.1**  **F-BF.2**  **A-SSE.4**  **A-APR.1**  **A-APR.6**  **A-CED.1**  **A-CED.4**  **A-REI.1**  **A-REI.2**  **A-REI.3**  **A-REI.4**  **RST.11-12.1**  **RST.11-12.2**  **RST.11-12.3**  **RST.11-12.4**  **RST.11-12.5**  **RST.11-12.6**  **RST.11-12.7**  **RST.11-12.8**  **RST.11-12.9**  **RST.11-12.10** | **IT-X.3**  **IT-X.4**  **IT-XI.2**  **IT-XI.3**  **IT-XI.4**  **IT-XVI.1**  **IT-XVI.2**  **IT-XVI.3**  **IT-XVI.4**  **IT-XIV.1**  **IT-XIV.2**  **IT-XIII.1**  **IT-XIII.2**  **IT-XIII.3**  **IT-XIII.4**  **COMP-I.1**  **COMP-II.1**  **COMP-II.2**  **COMP-III.1**  **COMP-III.2**  **COMP-IV.1**  **COMP-IV.2**  **COMP-IV.3**  **COMP-V.2**  **COMP-V.3**  **COMP-V.4**  **COMP-VI-A.3**  **COMP-VI-A.4**  **COMP-VI-B.1**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3** | **4** |
| 1. Practice error catching/handling | |  | |  |  | **S-ID.8**  **S-MD.5**  **S-MD.6**  **S-MD.7**  **S-MD.8**  **G-SRT.8**  **G-GPE.7**  **G-GMD.3**  **G-MG.2**  **F-BF.1**  **F-BF.2**  **A-SSE.4**  **A-APR.1**  **A-APR.6**  **A-CED.1**  **A-CED.4**  **A-REI.1**  **A-REI.2**  **A-REI.3**  **A-REI.4**  **RST.11-12.1**  **RST.11-12.2**  **RST.11-12.3**  **RST.11-12.4**  **RST.11-12.5**  **RST.11-12.6**  **RST.11-12.7**  **RST.11-12.8**  **RST.11-12.9**  **RST.11-12.10** | **IT-X.3**  **IT-X.4**  **IT-XI.2**  **IT-XI.3**  **IT-XI.4**  **IT-XVI.1**  **IT-XVI.2**  **IT-XVI.3**  **IT-XVI.4**  **IT-XIV.1**  **IT-XIV.2**  **IT-XIII.1**  **IT-XIII.2**  **IT-XIII.3**  **IT-XIII.4**  **COMP-I.1**  **COMP-II.1**  **COMP-II.2**  **COMP-III.1**  **COMP-III.2**  **COMP-IV.1**  **COMP-IV.2**  **COMP-IV.3**  **COMP-V.2**  **COMP-V.3**  **COMP-V.4**  **COMP-VI-A.3**  **COMP-VI-A.4**  **COMP-VI-B.1**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3** | **4** |
| **ASSESSMENT DESCRIPTIONS\*: (Write a brief overview here. Identify Formative/Summative. Actual assessments will be accessed by a link to PDF file or Word doc. )**  InternetAccessability.doc – research project/review (summative)  Different development projects – example TeamGUIDesign.docx (formative)  **\*Attach Unit Summative Assessment, including Scoring Guides/Scoring Keys/Alignment Codes and DOK Levels for all items. Label each assessment according to the unit descriptions above ( i.e., Grade Level/Course Title/Course Code, Unit #.)** | | | | | | | | |
| **Obj. #** | **INSTRUCTIONAL STRATEGIES (research-based): (Teacher Methods)** | | | | | | | |
| 8, 4 | 1. Lecture, Independent Learning | | | | | | | |
| 2,4,6,7 | 1. Lecture, Demonstration, Independent Learning | | | | | | | |
| 1,3,5,10 | 1. Lecture, Lab | | | | | | | |
| **Obj. #** | **INSTRUCTIONAL ACTIVITIES: (What Students Do)** | | | | | | | |
| 8 , 9 | 1. GUI Programming - Web Site Design video from Cambridge Education – Guide included also guistandards.pdf for lecture/discussion | | | | | | | |
| 2,4,6,7 | 1. Accessibility lecture, demonstration, research and discussion (AccessiblityConsiderations.pdf, Guidelines for accessibility.docs) | | | | | | | |
| 1,3,5,10 | 1. Event Driven programming lecture/programming (Event.DrivenProgrammingpdf.pdf and OOP vs Structures) | | | | | | | |
| **UNIT RESOURCES: (include internet addresses for linking)** | | | | | | | | |