

DESE Model Curriculum

GRADE LEVEL/UNIT TITLE: 11-12/Explore Additional Programming Concepts

Course Code: 034355

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?						
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	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	3

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				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-	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	
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				12.6 WHST.11- 12.7 WHST.11- 12.8 WHST.11- 12.9		
2. 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	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	3

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				L.11-12.3	COMP-IV.2	
				L.11-12.4	COMP-IV.3	
				L.11-12.5	COMP-V.2	
				L.11-12.6	COMP-V.3	
				RST.11-12.1	COMP-V.4	
				RST.11-12.2	COMP-VI-	
				RST.11-12.3	A.3	
				RST.11-12.4	COMP-VI-	
				RST.11-12.5	A.4	
				RST.11-12.6	COMP-VI-B.1	
				RST.11-12.7	COMP-VI-B.2	
				RST.11-12.8	COMP-VI-B.3	
				RST.11-12.9	COMP-VI-B.4	
				RST.11-12.10	COMP-VI-C.1	
				WHST.11-	COMP-VI-C.2	
				12.1	COMP-VI-C.3	
				WHST.11-	COMP-VI-	
				12.2	D.1	
				WHST.11-	COMP-VI-	
				12.4	D.2	
				WHST.11-	COMP-VI-	
				12.5	D.3	
				WHST.11-	COMP-VI-E.3	
				12.6	COMP-VI-E.4	
				WHST.11-	COMP-VI-F.2	
				12.7	COMP-VI-F.3	
				WHST.11-	COMP-VI-F.4	
				12.8	COMP-VI-	
				WHST.11-	G.1	
				12.9	COMP-VI-	
					G.2	
					COMP-VI-	

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					<p>G.3</p> <p>COMP-VI-</p> <p>H.1</p> <p>COMP-VI-</p> <p>H.2</p> <p>COMP-VI-</p> <p>H.3</p> <p>COMP-VI-</p> <p>H.4</p> <p>COMP-VI-I.3</p> <p>COMP-VI-I.4</p> <p>COMP-VI-J.3</p> <p>COMP-VI-J.4</p> <p>COMP-VI-K.2</p> <p>COMP-VI-K.3</p> <p>COMP-VI-L.3</p> <p>COMP-VI-</p> <p>M.3</p> <p>COMM-I.A.1</p> <p>COMM-I.A.2</p> <p>COMM-I.A.3</p> <p>COMM-I.A.4</p> <p>COMM-I.B.1</p> <p>COMM-I.B.2</p> <p>COMM-I.B.3</p> <p>COMM-I.B.4</p> <p>COMM-I.C.1</p> <p>COMM-I.C.2</p> <p>COMM-I.C.3</p> <p>COMM-I.C.4</p> <p>COMM-I.D.1</p> <p>COMM-I.D.2</p>	
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					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. 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	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	1

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				L.11-12.2	COMP-V.3	
				L.11-12.3	COMP-V.4	
				L.11-12.4	COMP-VI-	
				L.11-12.5	A.3	
				L.11-12.6	COMP-VI-	
				RST.11-12.1	A.4	
				RST.11-12.2	COMP-VI-B.1	
				RST.11-12.3	COMP-VI-B.2	
				RST.11-12.4	COMP-VI-B.3	
				RST.11-12.5	COMP-VI-B.4	
				RST.11-12.6	COMP-VI-C.1	
				RST.11-12.7	COMP-VI-C.2	
				RST.11-12.8	COMP-VI-C.3	
				RST.11-12.9	COMP-VI-	
				RST.11-12.10	D.1	
				WHST.11-	COMP-VI-	
				12.1	D.2	
				WHST.11-	COMP-VI-	
				12.2	D.3	
				WHST.11-	COMP-VI-E.3	
				12.4	COMP-VI-E.4	
				WHST.11-	COMP-VI-F.2	
				12.5	COMP-VI-F.3	
				WHST.11-	COMP-VI-F.4	
				12.6	COMP-VI-	
				WHST.11-	G.1	
				12.7	COMP-VI-	
				WHST.11-	G.2	
				12.8	COMP-VI-	
				WHST.11-	G.3	
				12.9	COMP-VI-	
					H.1	

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					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-	
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					III.E.3 COMM-IV.1 COMM-IV.2 COMM-IV.3 COMM-IV.4	
4. 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	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-	1

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				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	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-	
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					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	
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					COMM-IV.3 COMM-IV.4	
5. 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	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	3

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				RST.11-12.2	COMP-VI-B.1	
				RST.11-12.3	COMP-VI-B.2	
				RST.11-12.4	COMP-VI-B.3	
				RST.11-12.5	COMP-VI-B.4	
				RST.11-12.6	COMP-VI-C.1	
				RST.11-12.7	COMP-VI-C.2	
				RST.11-12.8	COMP-VI-C.3	
				RST.11-12.9	COMP-VI-	
				RST.11-12.10	D.1	
				WHST.11-	COMP-VI-	
				12.1	D.2	
				WHST.11-	COMP-VI-	
				12.2	D.3	
				WHST.11-	COMP-VI-E.3	
				12.4	COMP-VI-E.4	
				WHST.11-	COMP-VI-F.2	
				12.5	COMP-VI-F.3	
				WHST.11-	COMP-VI-F.4	
				12.6	COMP-VI-	
				WHST.11-	G.1	
				12.7	COMP-VI-	
				WHST.11-	G.2	
				12.8	COMP-VI-	
				WHST.11-	G.3	
				12.9	COMP-VI-	
					H.1	
					COMP-VI-	
					H.2	
					COMP-VI-	
					H.3	
					COMP-VI-	
					H.4	

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					<p>COMP-VI-I.3</p> <p>COMP-VI-I.4</p> <p>COMP-VI-J.3</p> <p>COMP-VI-J.4</p> <p>COMP-VI-K.2</p> <p>COMP-VI-K.3</p> <p>COMP-VI-L.3</p> <p>COMP-VI-M.3</p> <p>COMM-I.A.1</p> <p>COMM-I.A.2</p> <p>COMM-I.A.3</p> <p>COMM-I.A.4</p> <p>COMM-I.B.1</p> <p>COMM-I.B.2</p> <p>COMM-I.B.3</p> <p>COMM-I.B.4</p> <p>COMM-I.C.1</p> <p>COMM-I.C.2</p> <p>COMM-I.C.3</p> <p>COMM-I.C.4</p> <p>COMM-I.D.1</p> <p>COMM-I.D.2</p> <p>COMM-I.D.3</p> <p>COMM-I.D.4</p> <p>COMM-III.E.3</p> <p>COMM-IV.1</p> <p>COMM-IV.2</p> <p>COMM-IV.3</p> <p>COMM-IV.4</p>	
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6. Describe and/or practice mobile application programming				RI.11-12.1	IT-X.3	3
				RI.11-12.2	IT-X.4	
				RI.11-12.3	IT-XI.2	
				RI.11-12.4	IT-XI.3	
				RI.11-12.5	IT-XI.4	
				RI.11-12.6	IT-XVI.1	
				RI.11-12.7	IT-XVI.2	
				RI.11-12.10	IT-XVI.3	
				W.11-12.1	IT-XVI.4	
				W.11-12.2	IT-XIV.1	
				W.11-12.4	IT-XIV.2	
				W.11-12.5	IT-XIII.1	
				W.11-12.6	IT-XIII.2	
				W.11-12.7	IT-XIII.3	
				W.11-12.8	IT-XIII.4	
				W.11-12.9	COMP-I.1	
				W.11-12.10	COMP-II.1	
				SL.11-12.1	COMP-II.2	
				SL.11-12.2	COMP-III.1	
				SL.11-12.3	COMP-III.2	
				SL.11-12.4	COMP-IV.1	
				SL.11-12.5	COMP-IV.2	
				SL.11-12.6	COMP-IV.3	
				L.11-12.1	COMP-V.2	
				L.11-12.2	COMP-V.3	
				L.11-12.3	COMP-V.4	
				L.11-12.4	COMP-VI-	
				L.11-12.5	A.3	
				L.11-12.6	COMP-VI-	
				RST.11-12.1	A.4	
				RST.11-12.2	COMP-VI-B.1	
				RST.11-12.3	COMP-VI-B.2	

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				RST.11-12.4	COMP-VI-B.3	
				RST.11-12.5	COMP-VI-B.4	
				RST.11-12.6	COMP-VI-C.1	
				RST.11-12.7	COMP-VI-C.2	
				RST.11-12.8	COMP-VI-C.3	
				RST.11-12.9	COMP-VI-	
				RST.11-12.10	D.1	
				WHST.11-	COMP-VI-	
				12.1	D.2	
				WHST.11-	COMP-VI-	
				12.2	D.3	
				WHST.11-	COMP-VI-E.3	
				12.4	COMP-VI-E.4	
				WHST.11-	COMP-VI-F.2	
				12.5	COMP-VI-F.3	
				WHST.11-	COMP-VI-F.4	
				12.6	COMP-VI-	
				WHST.11-	G.1	
				12.7	COMP-VI-	
				WHST.11-	G.2	
				12.8	COMP-VI-	
				WHST.11-	G.3	
				12.9	COMP-VI-	
					H.1	
					COMP-VI-	
					H.2	
					COMP-VI-	
					H.3	
					COMP-VI-	
					H.4	
					COMP-VI-I.3	
					COMP-VI-I.4	

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					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	
7. Discuss handicap accessibility considerations in programming				RI.11-12.1 RI.11-12.2 RI.11-12.3	IT-IV.1 IT-IV.2 IT-IV.3	3

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				RI.11-12.4	IT-IV.4	
				RI.11-12.5	IT-X.3	
				RI.11-12.6	IT-X.4	
				RI.11-12.7	IT-XI.2	
				RI.11-12.10	IT-XI.3	
				W.11-12.1	IT-XI.4	
				W.11-12.2	IT-XVI.1	
				W.11-12.4	IT-XVI.2	
				W.11-12.5	IT-XVI.3	
				W.11-12.6	IT-XVI.4	
				W.11-12.7	IT-XIV.1	
				W.11-12.8	IT-XIV.2	
				W.11-12.9	IT-XIII.1	
				W.11-12.10	IT-XIII.2	
				SL.11-12.1	IT-XIII.3	
				SL.11-12.2	IT-XIII.4	
				SL.11-12.3	IT-XV.1	
				SL.11-12.4	IT-XV.2	
				SL.11-12.5	IT-XV.3	
				SL.11-12.6	IT-XV.4	
				L.11-12.1	COMM-I.A.1	
				L.11-12.2	COMM-I.A.2	
				L.11-12.3	COMM-I.A.3	
				L.11-12.4	COMM-I.A.4	
				L.11-12.5	COMM-I.B.1	
				L.11-12.6	COMM-I.B.2	
				RST.11-12.1	COMM-I.B.3	
				RST.11-12.2	COMM-I.B.4	
				RST.11-12.3	COMM-I.C.1	
				RST.11-12.4	COMM-I.C.2	
				RST.11-12.5	COMM-I.C.3	
				RST.11-12.6	COMM-I.C.4	

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				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	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	
8. 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	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	4

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				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-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-	
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					<p>D.2</p> <p>COMP-VI-</p> <p>D.3</p> <p>COMP-VI-E.3</p> <p>COMP-VI-E.4</p> <p>COMP-VI-F.2</p> <p>COMP-VI-F.3</p> <p>COMP-VI-F.4</p> <p>COMP-VI-</p> <p>G.1</p> <p>COMP-VI-</p> <p>G.2</p> <p>COMP-VI-</p> <p>G.3</p> <p>COMP-VI-</p> <p>H.1</p> <p>COMP-VI-</p> <p>H.2</p> <p>COMP-VI-</p> <p>H.3</p> <p>COMP-VI-</p> <p>H.4</p> <p>COMP-VI-I.3</p> <p>COMP-VI-I.4</p> <p>COMP-VI-J.3</p> <p>COMP-VI-J.4</p> <p>COMP-VI-K.2</p> <p>COMP-VI-K.3</p> <p>COMP-VI-L.3</p> <p>COMP-VI-</p> <p>M.3</p>	
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9. Practice programming for efficiency				S-ID.8	IT-X.3	4
				S-MD.5	IT-X.4	
				S-MD.6	IT-XI.2	
				S-MD.7	IT-XI.3	
				S-MD.8	IT-XI.4	
				G-SRT.8	IT-XVI.1	
				G-GPE.7	IT-XVI.2	
				G-GMD.3	IT-XVI.3	
				G-MG.2	IT-XVI.4	
				F-BF.1	IT-XIV.1	
				F-BF.2	IT-XIV.2	
				A-SSE.4	IT-XIII.1	
				A-APR.1	IT-XIII.2	
				A-APR.6	IT-XIII.3	
				A-CED.1	IT-XIII.4	
				A-CED.4	COMP-I.1	
				A-REI.1	COMP-II.1	
				A-REI.2	COMP-II.2	
				A-REI.3	COMP-III.1	
				A-REI.4	COMP-III.2	
				RST.11-12.1	COMP-IV.1	
				RST.11-12.2	COMP-IV.2	
				RST.11-12.3	COMP-IV.3	
				RST.11-12.4	COMP-V.2	
				RST.11-12.5	COMP-V.3	
				RST.11-12.6	COMP-V.4	
				RST.11-12.7	COMP-VI-	
				RST.11-12.8	A.3	
				RST.11-12.9	COMP-VI-	
				RST.11-12.10	A.4	
					COMP-VI-B.1	
					COMP-VI-B.2	

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					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	
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					COMP-VI-J.3 COMP-VI-J.4 COMP-VI-K.2 COMP-VI-K.3 COMP-VI-L.3 COMP-VI-M.3	
10. 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	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	4

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				RST.11-12.6 RST.11-12.7 RST.11-12.8 RST.11-12.9 RST.11-12.10	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-	
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					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	
ASSESSMENT DESCRIPTIONS*: (Write a brief overview here. Identify Formative/Summative. Actual assessments will be accessed by a link to PDF file or Word doc.) InternetAccessibility.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	2. Lecture, Demonstration, Independent Learning					
1,3,5,10	3. Lecture, Lab					
Obj. #	INSTRUCTIONAL ACTIVITIES: (What Students Do)					

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8 , 9	1. GUI Programming - Web Site Design video from Cambridge Education – Guide included also guistandards.pdf for lecture/discussion
2,4,6,7	2. Accessibility lecture, demonstration, research and discussion (AccessiblityConsiderations.pdf, Guidelines for accessibility.docs)
1,3,5,10	3. Event Driven programming lecture/programming (Event.DrivenProgrammingpdf.pdf and OOP vs Structures)
UNIT RESOURCES: (include internet addresses for linking)	