

DESE Model Curriculum: Computer Programming (CIP Code: 11.0103)

GRADE LEVEL/UNIT TITLE: 11-12/Prepare for Employment

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.						
UNIT DESCRIPTION					SUGGESTED UNIT TIMELINE	
Students will discover opportunities in the field of IT while improving communication skills.					1.5 weeks	
					CLASS PERIOD (min.)	
					50 min.	
ESSENTIAL QUESTIONS						
1. What do you do in a typical day working in Information Technology?						
2. What is the value of effective communication?						
ESSENTIAL MEASURABLE LEARNING OBJECTIVES	NBEA STANDARD					DOK
1. Demonstrate working as a team	IT-VIII.	COMM-I.B.1	COMM-I.D.3	COMM-III.B.1	COMM-III.D.3	3
	IT-VIII.2	COMM-I.B.2	COMM-I.D.4	COMM-III.B.2	COMM-III.D.4	
	IT-VIII.3	COMM-I.B.3	COMM-II.A.1	COMM-III.B.3	COMM-III.E.1	
	IT-XVI.1	COMM-I.B.4	COMM-II.A.2	COMM-III.B.4	COMM-III.E.2	
	IT-XVI.2	COMM-I.C.1	COMM-II.A.3	COMM-III.C.1	COMM-III.E.3	
	IT-XVI.3	COMM-I.C.2	COMM-II.A.4	COMM-III.C.2	COMM-III.E.4	
	COMM-I.A.1	COMM-I.C.3	COMM-II.B.1	COMM-III.C.3	COMM-IV.1	
	COMM-I.A.2	COMM-I.C.4	COMM-II.B.2	COMM-III.C.4	COMM-IV.2	
	COMM-I.A.3	COMM-I.D.1	COMM-II.B.3	COMM-III.D.1	COMM-IV.3	
COMM-I.A.4	COMM-I.D.2	COMM-II.B.4	COMM-III.D.2	COMM-IV.4		
2. Search the web and other places to locate career-planning information and job opportunities related to programming	IT-I.1	CARDEV-I.A.2	CARDEV-III.B.1	CARDEV-III.F.4	CARDEV-V.A.3	2
	IT-I.2	CARDEV-I.A.3	CARDEV-III.B.2	CARDEV-III.G.1	CARDEV-V.A.4	
	IT-V.1	CARDEV-I.A.4	CARDEV-III.B.3	CARDEV-III.G.2	CARDEV-V.B.1	
	IT-V.2	CARDEV-I.B.1	CARDEV-III.B.4	CARDEV-III.G.3	CARDEV-V.B.2	
	IT-V.3	CARDEV-I.B.2	CARDEV-III.C.1	CARDEV-III.G.4	CARDEV-V.B.3	
	IT-VI.1	CARDEV-I.B.3	CARDEV-III.C.2	CARDEV-IV.A.1	CARDEV-V.B.4	
	IT-VI.2	CARDEV-I.B.4	CARDEV-III.C.3	CARDEV-IV.A.2	CARDEV-V.C.1	
	IT-VI.3	CARDEV-II.A.1	CARDEV-III.C.4	CARDEV-IV.A.3	CARDEV-V.C.2	
	IT-VIII.1	CARDEV-II.A.2	CARDEV-III.D.1	CARDEV-IV.A.4	CARDEV-V.C.3	
IT-VIII.2	CARDEV-II.A.3	CARDEV-III.D.2	CARDEV-IV.B.1	CARDEV-V.C.4		

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	IT-VIII.3	CARDEV-II.A.4	CARDEV-III.D.3	CARDEV-IV.B.2	CARDEV-VI.A.1	
	IT-XVI.1	CARDEV-II.B.1	CARDEV-III.D.4	CARDEV-IV.B.3	CARDEV-VI.A.2	
	IT-XVI.2	CARDEV-II.B.2	CARDEV-III.E.1	CARDEV-IV.B.4	CARDEV-VI.A.3	
	IT-XVI.3	CARDEV-II.B.3	CARDEV-III.E.2	CARDEV-IV.C.1	CARDEV-VI.A.4	
	IT-XVIII.1	CARDEV-II.B.4	CARDEV-III.E.3	CARDEV-IV.C.2	CARDEV-VI.B.1	
	IT-XVIII.2	CARDEV-III.A.1	CARDEV-III.E.4	CARDEV-IV.C.3	CARDEV-VI.B.2	
	IT-XVIII.2	CARDEV-III.A.2	CARDEV-III.F.1	CARDEV-IV.C.4	CARDEV-VI.B.3	
	IT-XVIII.4	CARDEV-III.A.3	CARDEV-III.F.2	CARDEV-V.A.1	CARDEV-VI.B.4	
	CARDEV-I.A.1	CARDEV-III.A.4	CARDEV-III.F.3	CARDEV-V.A.2		
3. Identify careers in the information technology field	IT-I.1	CARDEV-I.B.1	CARDEV-III.B.3	CARDEV-III.G.1	CARDEV-V.A.3	1
	IT-I.2	CARDEV-I.B.2	CARDEV-III.B.4	CARDEV-III.G.2	CARDEV-V.A.4	
	IT-V.1	CARDEV-I.B.3	CARDEV-III.C.1	CARDEV-III.G.3	CARDEV-V.B.1	
	IT-V.2	CARDEV-I.B.4	CARDEV-III.C.2	CARDEV-III.G.4	CARDEV-V.B.2	
	IT-V.3	CARDEV-II.A.1	CARDEV-III.C.3	CARDEV-IV.A.1	CARDEV-V.B.3	
	IT-VI.1	CARDEV-II.A.2	CARDEV-III.C.4	CARDEV-IV.A.2	CARDEV-V.B.4	
	IT-VI.2	CARDEV-II.A.3	CARDEV-III.D.1	CARDEV-IV.A.3	CARDEV-V.C.1	
	IT-VI.3	CARDEV-II.A.4	CARDEV-III.D.2	CARDEV-IV.A.4	CARDEV-V.C.2	
	IT-VIII.1	CARDEV-II.B.1	CARDEV-III.D.3	CARDEV-IV.B.1	CARDEV-V.C.3	
	IT-VIII.2	CARDEV-II.B.2	CARDEV-III.D.4	CARDEV-IV.B.2	CARDEV-V.C.4	
	IT-VIII.3	CARDEV-II.B.3	CARDEV-III.E.1	CARDEV-IV.B.3	CARDEV-VI.A.1	
	IT-XVIII.1	CARDEV-II.B.4	CARDEV-III.E.2	CARDEV-IV.B.4	CARDEV-VI.A.2	
	IT-XVIII.2	CARDEV-III.A.1	CARDEV-III.E.3	CARDEV-IV.C.1	CARDEV-VI.A.3	
	IT-XVIII.2	CARDEV-III.A.2	CARDEV-III.E.4	CARDEV-IV.C.2	CARDEV-VI.A.4	
	IT-XVIII.4	CARDEV-III.A.3	CARDEV-III.F.1	CARDEV-IV.C.3	CARDEV-VI.B.1	
	CARDEV-I.A.1	CARDEV-III.A.4	CARDEV-III.F.2	CARDEV-IV.C.4	CARDEV-VI.B.2	
	CARDEV-I.A.2	CARDEV-III.B.1	CARDEV-III.F.3	CARDEV-V.A.1	CARDEV-VI.B.3	
	CARDEV-I.A.3	CARDEV-III.B.2	CARDEV-III.F.4	CARDEV-V.A.2	CARDEV-VI.B.4	
	CARDEV-I.A.4					

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4. Demonstrate communication skills	COMM-I.A.1	COMM-I.C.2	COMM-II.A.2	COMM-III.B.2	COMM-III.F.2	2
	COMM-I.A.2	COMM-I.C.3	COMM-II.A.3	COMM-III.B.3	COMM-III.F.3	
	COMM-I.A.3	COMM-I.C.4	COMM-II.A.4	COMM-III.B.4	COMM-III.F.4	
	COMM-I.A.4	COMM-I.D.1	COMM-II.B.1	COMM-III.E.1	COMM-IV.1	
	COMM-I.B.1	COMM-I.D.2	COMM-II.B.2	COMM-III.E.2	COMM-IV.2	
	COMM-I.B.2	COMM-I.D.3	COMM-II.B.3	COMM-III.E.3	COMM-IV.3	
	COMM-I.B.3	COMM-I.D.4	COMM-II.B.4	COMM-III.E.4	COMM-IV.4	
	COMM-I.B.4	COMM-II.A.1	COMM-III.B.1	COMM-III.F.1		
	COMM-I.C.1					
5. Demonstrate logical thinking	IT-V.1	IT-V.2	IT-V.3	IT-X.3	IT-X.4	3
6. Demonstrate interpersonal skills	COMM-I.A.1	COMM-I.B.3	COMM-II.B.1	COMM-III.B.3	COMM-III.F.4	2
	COMM-I.A.2	COMM-I.B.4	COMM-II.B.2	COMM-III.B.4	COMM-IV.1	
	COMM-I.A.3	COMM-II.A.1	COMM-II.B.3	COMM-III.F.1	COMM-IV.2	
	COMM-I.A.4	COMM-II.A.2	COMM-II.B.4	COMM-III.F.2	COMM-IV.3	
	COMM-I.B.1	COMM-II.A.3	COMM-III.B.1	COMM-III.F.3	COMM-IV.4	
	COMM-I.B.2	COMM-II.A.4	COMM-III.B.2			
7. Create a resume	COMM-I.D.1	COMM-IV.1	CARDEV-I.B.1	CARDEV-V.B.1	CARDEV-VI.A.1	4
	COMM-I.D.2	COMM-IV.2	CARDEV-I.B.2	CARDEV-V.B.2	CARDEV-VI.A.2	
	COMM-I.D.3	COMM-IV.3	CARDEV-I.B.3	CARDEV-V.B.3	CARDEV-VI.A.3	
	COMM-I.D.4	COMM-IV.4	CARDEV-I.B.4	CARDEV-V.B.4	CARDEV-VI.A.4	
	COMM-III.F.1	CARDEV-I.A.1	CARDEV-V.A.1	CARDEV-V.C.1	CARDEV-VI.B.1	
	COMM-III.F.2	CARDEV-I.A.2	CARDEV-V.A.2	CARDEV-V.C.2	CARDEV-VI.B.2	
	COMM-III.F.3	CARDEV-I.A.3	CARDEV-V.A.3	CARDEV-V.C.3	CARDEV-VI.B.3	
	COMM-III.F.4	CARDEV-I.A.4	CARDEV-V.A.4	CARDEV-V.C.4	CARDEV-VI.B.4	
8. Demonstrate good interview skills	COMM-I.A.1	COMM-I.B.3	COMM-II.B.1	COMM-III.B.3	COMM-III.F.4	3
	COMM-I.A.2	COMM-I.B.4	COMM-II.B.2	COMM-III.B.4	COMM-IV.1	
	COMM-I.A.3	COMM-II.A.1	COMM-II.B.3	COMM-III.F.1	COMM-IV.2	
	COMM-I.A.4	COMM-II.A.2	COMM-II.B.4	COMM-III.F.2	COMM-IV.3	
	COMM-I.B.1	COMM-II.A.3	COMM-III.B.1	COMM-III.F.3	COMM-IV.4	
	COMM-I.B.2	COMM-II.A.4	COMM-III.B.2			

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9. Exhibit leadership skills through a student organization (e.g. FBLA, PBL, ACM)	COMM-I.A.1	COMM-II.B.3	COMM-IV.1	MGMT-I.D.2	MGMT-IV.D.3	3
	COMM-I.A.2	COMM-II.B.4	COMM-IV.2	MGMT-I.D.3	MGMT-IV.D.4	
	COMM-I.A.3	COMM-III.B.1	COMM-IV.3	MGMT-IV.A.1	MGMT-IV.E.1	
	COMM-I.A.4	COMM-III.B.2	COMM-IV.4	MGMT-IV.A.2	MGMT-IV.E.2	
	COMM-I.B.1	COMM-III.B.3	MGMT-I.A.1	MGMT-IV.A.3	MGMT-IV.E.3	
	COMM-I.B.2	COMM-III.B.4	MGMT-I.A.2	MGMT-IV.A.4	MGMT-IV.E.4	
	COMM-I.B.3	COMM-III.C.1	MGMT-I.A.3	MGMT-IV.B.1	MGMT-V.A.1	
	COMM-I.B.4	COMM-III.C.2	MGMT-I.B.1	MGMT-IV.B.2	MGMT-V.A.2	
	COMM-II.A.1	COMM-III.C.3	MGMT-I.B.2	MGMT-IV.B.3	MGMT-V.A.3	
	COMM-II.A.2	COMM-III.C.4	MGMT-I.B.3	MGMT-IV.B.4	MGMT-V.A.4	
	COMM-II.A.3	COMM-III.D.1	MGMT-I.C.1	MGMT-IV.C.3	MGMT-V.B.1	
	COMM-II.A.4	COMM-III.D.2	MGMT-I.C.2	MGMT-IV.C.4	MGMT-V.B.2	
	COMM-II.B.1	COMM-III.D.3	MGMT-I.C.3	MGMT-IV.D.1	MGMT-V.B.3	
	COMM-II.B.2	COMM-III.D.4	MGMT-I.D.1	MGMT-IV.D.2	MGMT-V.B.4	
	ASSESSMENT DESCRIPTIONS					
Job Interview Day – Advisory committee interviewing the students – see attached rubric (summative)						
OBJ. #	INSTRUCTIONAL STRATEGIES					
1, 6	1. Lecture					
4, 5	2. Independent Learning					
2, 3, 7, 8	3. Independent Learning					
9	4. Independent Learning					
OBJ. #	INSTRUCTIONAL ACTIVITIES					
1, 6	1. Lecture and discussion on duties and day-to-day life (Areas of IS Employment ppts)					
4, 5	2. Following directions activity – student practice activity					
2, 3, 7, 8	3. Initials skills summary and job search assignment					
9	4. Student research on Video game development and new technology					
UNIT RESOURCES						
n/a						