CIS 110 Week 1

MATERIALS: Course syllabus; Textbook (Joyce Farrell: A Guide to Programming Design and Logic – Chapter 1); student handouts: assessment test

	OBJECTIVE	RECOMMENDED / REQUIRED ACTIVITY	APPROX. TIME
REVIEW	Students demonstrate skills and competencies from the course prerequisites: BIS 105 and MAT 101.	Go over the prerequisite skills and competencies listed on the course syllabus. Administer the BIS 105/MAT 101 assessment test.	20 min.
INTRODUCE	Students will: 1. Know what the course is about, what the learning outcomes are, how the course fits into the CIS degree programs, and what is expected from them to complete the course successfully. 2. SECTION A – UNDERSTANDING COMPUTER PROGRAMMING	Go over the course syllabus. Answer any questions.	30 min.
		Activity: To introduce the concept of prgramming as instructions, use Activity Sheet Week 1 PBJ, making a peanut butter and jelly sandwich.	15 min.
		Lead a lecture/discussion session.	40 min.
	• Describe the data processing cycle of input, processing, output and storage. • Explain the difference between syntax errors and logical errors. • List the steps involved in producing a computer program.	• Ask students to describe what they think is the data processing cycle of input, processing, output and storage. Draw diagrams as you discuss. • Ask them to define logic and syntax. Then show examples of errors for each and ask the student to identify whether an error is logical or syntax. • Go over the IPO cycle and how it is used as the foundation of many programs. • Go over the steps in the programming process and explain how the CIS 110-CIS 111 sequence will cover the entire programming	

		process experience. • Give examples of the data hierarchy for files. Lead a lecture/discussion session.	
	• Describe the data hierarchy of file, record, field and character. 3. Section B – Introduction to Flowcharting and Pseudocode • Identify and appropriately use the basic flowcharting symbols for input, processing, output, and decisions plus the terminal symbol and connectors.	• Go over the names and shapes for the basic flowcharting symbols. **Activity**: Divide into groups of two and create a flowchart for the PBJ activity. (have them work on overhead acetate or a large chart for later sharing) Share and discuss one or two examples.	30 min. 10 min
	• Identify and appropriately use pseudocode key words and indentation formats for input, processing, output and decisions. • Explain the difference between flowcharts and pseudocode.	• Go over the basics of pseudocode: use of key words and the use of indentation to show the logic. • Compare and contrast flowcharts and pseudocode. **Activity**: The same groups write the pseudocode for the PBJ activity. Share and discuss one or two examples.	10 min..
	• Define a variable. • Apply both rules for good variable names. • Use a sentinel or dummy value. • Use a connector symbol. • Recognize the proper format of assignment statements. • Explain the difference between character and numeric variables.	• Explain variables as names for memory storage locations and their importance in programming. Explain the difference between a variable and the value that may be held in the variable. Use physical containers such as clear plastic bags or boxes or even chairs to represent variables. Use index cards with values written on them to place inside the variable to emphasize that values held in the variables change. • This is a good place to explain the importance of having a standard for naming variables, etc. You could also include the 2 basic data types: character and numeric. • Introduce "loops" and the technique of using a sentinel to	

		stop a loop. • Practice writing assignment statements. Note the correct format and be aware that many students will want to write these "backwards."	
PRACTICE	Students will practice: Drawing flowcharts and writing simple pseudocode.	Include in-class practice for creating both flowcharts and pseudocode. Do some of the problems in the book that are not assigned for homework. Do in-class practice of using the naming standards given on page 20.	20 min.
SUMMARY	Students will know the objectives covered in the textbook and the class.	Have students write on a sheet of paper answers to these questions: 1) What two things did you learn today? 2) What is still confusing or not clear? (You may choose to have students do this anonymously if you feel students will be more willing to admit there are topics they did not understand.) Collect these and review before next class to assist with class preparation.	10 min.
ASSIGNMENT	For next class: Read Chapter 2.	Read: Chapter 1. Suggested homework exercises: page 14:8; page 29:2; page 30: 3d thru 3j, 4a, 5b. See Chapter 1 of the Instructor's Manual for an alternative handout exercise on flowcharts. This exercise could be given as homework or it could be used as an in-class exercise. Pass out the URL or put it on your Web site: http://www.hccbrandon.net/turbohal/turbohal.html or the Turbo Hal Activity that you will do next week. Ask them to look at the site. (see Turbo Hal Activity)	
NOTES	The Key for the assessment test is included with Chapter 1 of the Instructor Manual. After you give the assessment test, you may need to provide counseling to students who determine they are registered for the wrong course. Direct students to a Business Division counselor if necessary. The Counselors are located in the Teleport in Building 11, Room 11346 the first two days of every quarter; otherwise the Business Counselors are in Room 6131.		

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PREP	Review notes in instructor's manual for Chp 1: A&B Not all CIS classrooms have an instructor PC with projection. PowerPoint slides available on the Instructor CD may be made into transparencies through SCC Media Services. You might want to make transparencies for Chapters 1-6, 8-9 and 13 all at once. Duplicate the teaching syllabus and copies of the assessment test. Duplicate copies of the alternative flowchart exercise in Chapter 1 of the Instructor Manual if you choose to use it. Bring peanut butter, jelly, plastic knives, paper plates, and napkins. Bring clear plastic bags or small cardboard boxes. Bring index cards and a marker.