CS1: Algorithms and Computer Programming I

Week/Topic	Ass't/*Announce*/Eval	Due Today/Returned	Activities/Assessment	Instructor Preparation
1 - x-9/6-9/8	Logistics and Overview			
Monday				
Wednesday	Initial Reflection - due Wk 2 (9/11)	Interview person for web page	**Review projects from previous years activity** - groups review projects for past 111 classes - all 4 types; interesting features; how could be improved; what exited to learn	add link to St. Kate's Computer Science Gallery
	Lab 1: Moodle - due in Lab		**Syllabus Activity** - go over syllabus and calendar - this explains how will be able to complete projects - expectations	post syllabus and calendar
	Personal Web Page - due Wk 3 (9/20)		**Labs** - attendance expectations; role in learning; available times (straw poll); this week is moodle; importance - online resources (labs, reading questions, tech sheets, lessons) for project, hw and tests	post documents required for lab: questionaire, assignments, etc
	Homework 1 (moodle) - due Monday (9/11)		**Projects** - Why projects? Way to use technical in creative and rewarding project; develop professional skills important for jobs and graduate programs; first projects, hw and tests used to evaluate technical and professional - need minimum to be able to do final project; Introduce first project - pair up students	post project description; HTML labs, tech sheets; presentation tips; design principles
	Reading - Epp (Appendix A) - Study Questions posted on Moodle (may be on test) Student-to-Professional Index Survey - due Monday (9/11)		**Introduction to HTML -** demonstrate the basics; they create a basic HTML page; online resources and readings **Interview / work time**	post reading questions
Lab (Friday-ysn)			**Lab in O'Neill (or during student tutor time)**: *Lab 1:* Moodle introduction; directly tied to Homework on Monday; online lesson on presentations, reading study questions	
2 - 9/11-9/13-9/15	Baby Objects and File and Code Organization Techniques			
Monday	Homework 2 (HTML) - due Monday (9/18)	Initial Reflection	**Homework Assignment:** Overview of HW and associated lab; JavaScript introduced	
	Lab 2: Troubleshooting (syntax) - due in Lab	Homework 1 (moodle)	**Timelines & Risk Analysis:** Newbies & Probies, Project 1 timeline	
	---	Student-to-Professional Index Survey	**Baby Objects:** document structure, image properties, font properties	

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	Personal Web Page Project - due next Wednesday Reading - McDuffie (Chapters 1 & 2) - Study Questions posted on Moodle (may be on test)		**File Organization:** directories, files; site map **Code Organization:** indenting, break lines; code documentation **Tech sheets**: where they are and how to use them	
Wednesday	*Homework 2 due Monday*		**Baby Functions:** location, calling, structure, referring to form objects **Risk Analysis:** of Project 1; must have, would be nice; know now, etc **CD sleeves:** analyzing; how to make them	
Lab (Friday-ysn)			**Lab in O'Neill (or during student tutor time)**: *Lab 2:* Troubleshooting (syntax)	
3 - 9/18-9/20-9/22	Personal Web Page Project			
Monday	Homework 3 (troubleshooting) - due Monday (9/25) Lab 3: Troubleshooting (run time and debugger) - due in Lab Portfolio (check in 1) - due Wk 4 (9/27)	Homework 2 (HTML) --- *Initial Reflection* *Homework 1*	**Homework Assignment:** Overview of HW and associated lab; flow charts introduced (similar to syntax chart) **Portfolio:** purpose; making exhibits (practice with a lab or homework exercise); check ins **Professional development: *Overview of student-to-professional survey results;*** Self evaulation forms and what the terms mean. Practice evaluation with clips **Sign up for presentations**: go through procedure **Work time**	template for portfolio exhibit copies of Individual Performance Evaluation - Novice level sign up sheet
Wednesday	*Remember Portfolio check in 1 due on Wednesday*	Personal Web Page - Presentation, handout, documentation, files	**Presentations**	cookies?
Lab (Friday-ysn)		--- *Post Web pages on web and email for final check*	**Lab in O'Neill (or during student tutor time)**: *Lab 3:* Troubleshooting (Objects, GUIs, objects, run time - debugger)	
4- 9/25-9/27-9/29	Inputs and Variables			

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Monday	Homework 4 (inputs and variables) - due Monday (10/2) Lab 4: /IO, math - due in Lab --- JavaScript Project - due Wk 8 (10/25) Reading - McDuffie (Chapters 3 & 4) - Study Questions posted on Moodle (may be on test) **Test 1 Review posted** --- *Remember Portfolio check in 1 due on Wednesday*	Homework 3 (troubleshooting) --- *Homework 2*	**JavaScript project:** adding intelligence; brainstorm useful intelligent functionalities; relate to characteristics (ability to abandon if superfluous); relate to future lessons **Input/Output concept:** what they are, relation to project - for your planning: NEXT WEEK formally go over conditionals and loops; sample code on radio buttons, and check boxes	
Wednesday	*Test 1 will cover material from Sep 6 - today*	Portfolio (check in 1)	**Scope:** where are the guis, how to access them from other gui (via document, form) - use function template for now (baby functions) **Sign up for Individual Performance Evaluations next week**	sign in sheet
Lab (Friday-ysn)			**Lab in O'Neill (or during student tutor time)**: Test 1 review	
5- 10/2-10/4/10/6	Control Structures			
Monday	Homework 5 (control structures) - due in two weeks - Monday (10/16) Lab 5: **N-A-P-E (control structures) - due Friday (10/13) - START EARLY Reading - McDuffie (Chapters 5 & 6, 12) - Study Questions posted on Moodle (may be on test) --- *Remember Individual Performance Evalulations are this week* *Remember Test 1 is next week*	Homework 4 (inputs and variables)	**Conditionals and loop:** concept (Choose your own adventure; zork), flow chart visualization, pseudocode representation **Conditionals in JavaScript:** examples of problem - solution - pseudocode - code; using ? :, switch, and if	

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Wednesday	*Test 1 is Monday*		**Loops in JavaScript:** examples of problem - solution - pseudocode - code; using for, while	
Lab (Friday-ysn)			**Lab in O'Neill (or during student tutor time)**: Control structures (N-A-P-E). Remember different types of conditionals (nested vs. serial)l, nested loops, break, continue	
6 - 10/9-10/11-10/13	Arrays			
Monday			**Test 1 -** remaining time can be used for project or can prearrange to work elsewhere	
Wednesday	Homework 6 (arrays) - due in two weeks - Monday (10/23) Lab 6: N-A-P-E (arrays) - due in Lab (10/20) Reading - McDuffie (Chapters 7) - Study Questions posted on Moodle (may be on test) --- *Remember Homework 5 is due Monday*		**Arrays** - concept, characteristics, examples of problem - solution design - code; defininig, accessing, traversing, assigning arrays	
Lab (Friday-ysn)			**Lab in O'Neill (or during student tutor time)**: Arrays (N-A-P-E). Take a look at some of 112 which dealt with arrays of objects; these should be primitive (or String) arrays; array out of bounds, typical troubleshooting	
7 - 10/16-10/18-10/20	Command Line programs and Java compiler			
Monday	Homework 7 (Java basics) - due in two weeks - Wednesday (11/8 - after Test 2) Lab 7: Troubleshooting (compile errors) - due in Lab (11/3) Reading - Epp (Chapter 1, Appendix B) - Study Questions posted on Moodle (may be on test) ---	Homework 5 (control structures)	**Command line interface:** history, similarity to existing programs (e.g. voice mail), comparison to graphical interface; design issues **Change of references:** using Epp to try out compiler with working code **State diagram:** design for vending machine; design quiz program	

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	Remember Homework 6 is due Monday			
Wednesday	*Remember JavaScript project due next week*		**Java compiler:** Hello World, baby input (Favorite number, echo) - be sure can compile at your typical work computer **Work time for JavaScript Project:** where are they?	
Lab (Friday-ysn)			**Lab in O'Neill (or during student tutor time)**: Troubleshooting (compile errors)	
8 - 10/23-10/25-10/27	JavaScript Project			
Monday	Portfolio (check in 2) - due Wk 9 (11/1) **Test 2 review posted - since Friday is midterm break** --- *Remember JavaScript project is due Wednesday*	Homework 6 (arrays)	**Professional development:** Team member roles and responsibilities **Portfolio:** comments from last time for the whole class **Work time for JavaScript project**: Risk Analysis; timeline status	Mission: Impossible
Wednesday	*Test 2 topics will cover remaining material on JavaScript*	JavaScript Project- Presentation, handout, documentation, files	**JavaScript project** - done in front of class; give feedback to each other on Handouts	
Lab (Friday-ysn)		--- *Post Web pages on web and email for final check*	**Midterm Break**	
9 - 10/30-11/1-11/3	Designing command line programs (return to control structures), Java I/O			
Monday	Homework 8 (Java I/O and control structures) - due in two weeks - Monday (11/13) Lab 8: Java basic I/O and control structures - due in Lab (11/10)		**Homework overview -** Lab 7 due this week (Troubleshooting - compiler); This new lab is helpful in moving forward on project; "Probational preparation A" assigned **Introduce Java project (Phases 1 & 2) - Application design:** break down characteristics of the program - motivate need for I/O, objects	

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	Java Game - Phase 1: command line program - due Wk 11 (11/15) Reading - Epp (Chapters 2, 4, 5) - Study Questions posted on Moodle (may be on test) Probational Preparation A (I/O and control structures) - due Fri (11/3) -at Lynne Linder's office by 5:00 (Mendel 112) --- *Remember Portfolio check in 2 is due Wednesday* *Remember Test 2 is next week*		**What does a command line program looklike?** **Zork reverse engineering:** develop underlying structure using input, output, loops, variables, and conditionals **Designing programs:** review control structures (loops, conditionals, arrays) -JOHN?	
Wednesday	*Remember Individual Performance Evaluations are next week*	Portfolio (check in 2)	**Using control structures to implement logic:** practice with state diagram, basic console I/O - VENDING MACHINE? **Sign up for Individual Performance Evaluations next week**	This is the development of the quiz questions sign in sheet
Lab (Friday-ysn)			**Lab on line (or during student tutor time)**: Java I/O and Objects. Include basic troubleshooting with files and objects; practice with loops - see 112 material	
10 - 11/6-11/8-11/10	Objects			
Monday	*Remember IPEs are this week*		**Test 2 -** remaining time can be used for project or can prearrange to work elsewhere	
Wednesday	Lab 9: Objects - due in Lab (11/17) Homework 9 (Objects) - due in two weeks - Monday (11/20) Reading - Epp (Chapters 6 & 7) · Study Questions posted on Moodle (may be on test) Probational Preparation B (Objects and methods) - due Fri (11/10) -at Lynne Linder's office by 5:00 (Mendel 112)	Homework 7 (Java basics)	**Homework overview** - even though not due until 11/20, do lab - will help project; "Probational Preparation B" assigned **Objects:** declaring, creating, using, putting in arrays, defining as a class **I/O:** understand stream and buffer concepts; extend keyboard to file, string input and conversion; mention different comparison	

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	--- *Remember Phase 1 project due next week* *Bring in your current portfolio on Monday for portfolio activity*			
Lab (Friday-ysn)			**Lab on line (or during student tutor time)**:	
11 - 11/13-11/15-11/17	Project - Phase 1			
Monday	Portfolio (final) - due Wk 15 (12/13) Probational Preparation C (Arrays) - due Fri (11/17) -at Lynne Linder's office by 5:00 (Mendel 112) --- *Remember Phase 1 project is due Wednesday*	Homework 8 (Java I/O and control structures)	**Professional development:** Elements of team dynamics - correlate to evaluation areas **Portfolio:** share with each other; acknowledge strengths; disclose weaknesses; team creates plan for improvement for each member in this project; prepare for presentation to show why your team will produce a good product **Sign up for presentations**: go through procedure **Probational Preparation C assigned** - determine whether ready to be assigned to a team	Team evaluation sheets - grids for team interaction. Classify interactions using sheets
Wednesday		Game Project - Phase 1 - Presentation, handout, documentation, files	**Java Game project - Phase 1** - done in front of class and CSC guest professors; give feedback to each other on Handouts	invite guests; cookies
Lab (Friday-ysn)			**Lab on line (or during student tutor time)**:	
12 - 11/20-11/22-11/24	Arrays			
Monday	Homework 10 (2D arrays) - due in two weeks - Wed (11/29) Lab 10: 2D Arrays (N-A-P-E) - due in lab (11/27) **Test 3 Review posted - since Friday is Thanksgiving break** Reading-Epp (Chapter 10,13) - Study Questions posted on Moodle (may be on test) ---	Homework 9 (Objects)	**Homework overview -** even though not due until 11/29, useful for validating objects for final phase **Arrays** - again (2D, with Objects), display values in command line **Using 2D arrays**: declaring, using, printing, drawing so that the basic logic of the final game can be tested	

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	Remember this homework is due next week			
Wednesday	*Test 3 will cover from Oct 29-next Wed (Nov 29)*		**Applets:** basics (hello world - 3 starting methods-drawing techniques), how to use in HTML, events	
Lab (Friday-ysn)			**Lab on line (or during student tutor time)**: Review Questions for Test 3	
13 - 11/27-11/29-12/1	Applet I/O (GUI)			
Monday	Homework 11 (Applets and Events) - due in two weeks - Monday (12/6) Lab 11: Applets (N-A-P-E) - due in Lab (12/1) Reading - Epp (Chapter 3, 14, Appendix B) - Study Questions posted on Moodle (may be on test) --- *Remember this homework is due next week*	Homework 10 (Arrays)	**Homework overview** - applets useful for phase 2 game **Drawing grids and array contents to screen**	
Wednesday	*Remember that Test 3 is a week from Monday (12/4)*		**GUI:** define text and button; tech sheets used for other types; reference in readings	
Lab (Friday-ysn)			**Lab on line (or during student tutor time)**: Applets (N-A-P-E)	
14 - 12/4-12/6-12/8	Wrap up			
Monday	*Remember IPEs are this week (optional)*	Homework 11 (Applets and events)	**Test 3 -** remaining time can be used for project or can prearrange to work elsewhere; NO talking in classroom - either communicate in writing or leave to meet elsewhere (inform instructor before test starts)	

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Wednesday	Final Reflection - due at final presentation (12/13) --- *No formal lab this week* *Remember final project, portfolio and reflection are due next week Wed at 1:30-3:30! (different time)*		**Portfolios:** can pick up outside my office or I will return in 112 (for those who continue) - keep for interviews - next term will continue making exhibits but also create resume and cover letter. Look for job they may be interested in applying for - bring next term **Professional development:** Elements of team dynamics - correlate to evaluation areas **Sign up for presentations**: go through procedure	Team evaluation sheets - grids for team interaction. Classify interactions using sheets
Lab (Friday-ysn)			**No formal lab this week - office hours in O'Neill Center**	
Finals - 12/13	Final presentation			
Wednesday		Game Project - Phase 2 - Presentation, handout, documentation, files - 1 per team Portfolio - final Final Reflection --- *Post Web pages on web after presentation- students ensure working fine*	**Evaluations** - when done, upload project for presentations **Java Game project - Phase 2** - done in front of class and CSC guest professors; give feedback to each other on Handouts	invite guests; cookies