James Madison University – Department of Computer Science

CS280A` – Introduction to Computer Science

Course Syllabus – Fall 2005

	Announcements Section - Use to verify any e-mail.
Course meets:	Tuesday and Thursday – 2:00pm – 3:15 pm Tuesday – Lecture – Rm 243 Thursday – Lab – Rm 250

Instructor – Nancy Harris (mailto:harrisnl@jmu.edu)

Office:	ISAT/CS 217
Phone:	568-8771
AOL IM:	harrisnl55
Personal web page:	users.cs.jmu.edu/harrisnl

Please see the policies page for class policies: Policies Link

Course Schedule: Course Schedule Link

Office Hours

Monday	Tuesday	Wednesday	Thursday	Friday
9am – 10am 2 – 3pm	3:30 – 5:00pm	By appt	3:30 – 5:00pm	By appt

I may occasionally hold "virtual office hours" when a project is due or before an exam. These will be posted on Blackboard.

Helpful Links

Notes, labs and other material organized by topic	materials
Project information and homework	projects
Exam review – review guides	resources
Resources – slides, downloads, supplemental materials – organized in folders by type	resources

CS280A – Advanced Programming - Overview

General Overview: This course is designed for non-CS majors (or potential CS majors) who are interested in learning more about the field of computer science. Topics will include: computing history, personal computing security (e-mail, viruses, scams, and spy-ware), architecture of the computer and its relationship to applications, web page creation using HTML and JavaScript, database creation and use, and algorithmic thinking and problem solving. The course will be taught in an interactive environment with a combination of lectures, in-class exercises and labs.

Prerequisites: *There are no prerequisites to this class.*

Overall Objectives:

1. Computing Tools – Students will identify key elements of the computer system.
2. What is data? – Students will translate binary code into its numeric or character equivalent. (Bits and bytes) Students will compare digital and analog data and describe how data is stored in a computer system.
3. Computing History – Students will identify the people who contributed to the advancement of computing and the milestone events in computer history.
4. Using the internet – Students will use the internet to research and communicate in an ethical, responsible manner.
5. Problem solving – Students will write precise algorithms to solve a variety of problems.
6. HTML – Students will create simple web pages using standard HTML code.
7. Database Usage – Students will create a simple (no more than 3 table) database and will perform queries using any Access database.
8. Computer Programming – Students will animate their HTML web pages using JavaScript code.

Classes will be held in the classroom one day per week and in the lab one day per week. Classroom days will include lecture and group activities; lab days will include hands on computer activities. Some homework to prepare for or follow-up from any of the class activities may be required.

We will use Blackboard and the web as a means of communicating. Included will be the online grade book, lecture notes, surveys, practice quizzes and assignments. Announcements for class will be made on the Blackboard announcements page. Any other announcement that you receive through other means (such as e-mail) is suspect unless confirmed by Blackboard or the instructor's web page in the event of Blackboard failure. If I send an e-mail to the class as a whole, I will also put the text into a Blackboard or web announcement.

Textbooks and Required Materials

Snyder, Lawrence (2004). *Fluency with Information Technology:Skills Concepts & Capabilities.* Addison-Wesley. ISBN 0-201-75491-6. *Provides the basic information for most aspects of this class.* This book may be obtained from the JMU Bookstore, Amazon.com, BarnesAndNoble.com among others. Used books are available, but please do not get the Preliminary Version as it will not match the text used in class.

***Backup Media**: Whether you use a floppy disk or a memory stick, it will be important that you have a backup device available to use when we are doing lab activities. While you may use Blackboard's drop box and will submit on Blackboard's Assignment submission, sometimes the network goes down and you need some way to continue working. Lab machines do not provide a permanent save. When the machine is logged out, your work is lost.*

Grading Basis

Exam 1	20%
Exam 2	20%
Final Exam	25%
Projects	20%
Labs, class participation, homework, surveys	10%
Weekly terminology quizzes	5%

Generally, I grade on a 10 point scale: 90 = A, 80 = B, 70 = C, 60 = D, all others F. + and – grades are assigned to high values and low values in each range.

Projects	Percentage	Date Due
1. History web page – basic web design	20%	TBD
2. Access database project	30%	TBD
3. Basic JavaScript project	20%	TBD
4. Advanced JavaScript project	30%	TBD

Students with Disabilities – If you are a student with a documented disability, who will be requesting accommodations in my class, please make sure you are registered with the Office of Disability Services, Wilson Hall, Room 107 (568-6705) and provide me with a copy of your Access Plan letter outlining your accommodations. I will be glad to meet with you privately during my office hours to discuss your special needs. The sooner you can do this, the better I can assist you in meeting your learning goals in this course.

Students Responsibility - Students are responsible for registering for classes and for verifying their class schedules on e-campus. The deadline for **adding** a Fall Semester class without instructor or academic unit head signatures is Monday, Sept 5, 2005. After Monday, Sept 5, 2005 instructor and academic unit head signatures are required to add a class for Fall Semester 2005. No student will be allowed to register for a Fall Semester class after Thursday, Sept 15, 2005 – no appeals.

You are also responsible for withdrawing from this class if you choose to do so. I will **not** drop you if you stop attending, nor will I automatically give you a WP or WF grade. The "free" drop period ends on Friday, Sept 2, 2005. "W" grades apply after this date. The last date to drop a class with a "W" grade is Thursday, October 27, 2005.

Honor Policy – All work submitted for academic credit in this class must conform to the JMU honor code. When in doubt about whether work conforms to the honor policy, please ask before turning in such work for credit.

CS280 A – Fall 2005

Tentative Schedule – Subject to change

Black	Description of that day's topic or lab
Red	Item(s) that is(are) due this day
Green	Reading assignments – Unless otherwise stated, readings are from the Fluency text – Please read ahead to prepare for that week's classes.

Week	General Topic	Tuesday-lecture Room 243	Reading	Thursday-lab Room 250
1- Aug 30	Orientation and terminology	Introductions – Terminology	Chap 1, 2	Terminology
2- Sep 6	Networks and the WWW	Networks and the WWW	Chap 3, 4	What is a web page? Intro to HTML – in lab 250
		Quiz 1 due today before class		
3- Sep 13	Data Representation	How is data stored on the computer? Binary codes Applications vs data .doc .txt	Chap 8,9	HTML – in lab 250 Assign Project 1
				Quiz 2 due today before class
4- Sep 20	Data Representation	Finish data storage. Timeline of computing milestones Project 1 assigned	Chap 5, 6, 11	More advanced HTML techniques Examples of css (cascading style sheet – more later) css & html
		Quiz 3 due today before class.		HTMLLab due if not completed in class.
5- Sep 27	Databases	Data Storage Continued Unix Cheat sheet HTML Cheat sheet ftp instructions Browsers, crawlers, and query	Chap 6, 13	Database basics – terminology
				HTML 2 lab due (on server)
6- Oct 4	Databases	EXAM1 Coverage through Sept 28 Database on Exam 2	Chap 14, 15	Working with an existing database Movies.xls Movies.mdb Basic reporting
				Project 1 due
7- Oct 11	Databases	Creating a database movies.mdb Database design Cleaning up a database (Normalization process)	Chap 13, 14, 15, cont	Database design Joins and queries Make table, update queries
		Database Lab due		History presentation assigned Project 2 assigned
8- Oct 18	History and Programming	Finish database	Chap 10	What is an algorithm? Designing solutions

		History presentation due Database lab 2 due		Lab 6 due Project 2 part 1
9- Oct 25	History and JavaScript	Algorithms and debugging	Chap 7, 18	TestingAndDebugging BuggyButterfly Butterfly Pictures Tic Tac Toe
				Project 2 due
10- Nov 1	Algorithms and Java Script	Following instructions Introduction to JavaScript		Lab - Intro to JavaScript
11- Nov 8	JavaScript and Programming	Exam 2 Database and JavaScript	Chap 19, 20, 21	JavaScript constructs Project 3 assigned
				Nov 1 lab due
12- Nov 15	JavaScript and Programming	JavaScript constructs Abstraction and Iteration		More Java Script practice Functions, iteration Project 4 assigned
				Lab 8 due
1- Nov 22	Netiquette and using the web	Class cancelled		Thanksgiving – no class
		Project 3 due		No class today
2- Nov 29	Security	Netiquette and security	Chap 12, 17	Finish JavaScript Iteration, begin project 4
3-	Wrap up	Security and E-commerce	Chap 16, 23, 24	Wrap-up Review for exam
				Project 4 due
Dec - 13 Final Exam		Final Exam is given on Tuesday, Dec 13 from 1:30 – 3:30 in the lab		