CSE 686 Internet Programming, Spring 2018
Syllabus

Instructor: Edmund Yu, PhD
Associate Teaching Professor
Email: esyu@syr.edu
Phone: (315)443-3110
Office: CST 4-181

Class meetings: Mondays/Wednesdays 8am – 9:20am, Life Science Building 001

Office hours: Tuesday/Thursday: 3:30pm – 5:30pm

TA Office hours: Ziyi Zhao (zzhao@syr.edu), Wednesday/Friday 2-4pm, Office: CST 0-123
Gayathri Manogna Parimi (gparimi@syr.edu), Thu 3-5:30pm, CST 0-121
Jonathan Stryer (jmstryer@syr.edu), Mondays 2:15-4:15pm, Loc.: TBD

Textbooks:

- **Fundamentals of Web Development**, Randy Connolly & Ricardo Hoar, 2nd Edition, 2017, ISBN: 0134481267
- **Java Network Programming**, Elliotte Rusty Harold, 2013, O'Reilly, 4th Edition, ISBN: 1449357679
- **TCP/IP Sockets in Java**, Kenneth L. Calvert & Michael J. Donahoo, 2008, Morgan Kaufman, ISBN: 0-123-74255-2

Official documentation & Tutorials:

- Java: http://docs.oracle.com/javase/8/
- Java Tutorial: http://docs.oracle.com/javase/tutorial/tutorialLearningPaths.html
- XAMPP: https://www.apachefriends.org/index.html
- HTML5, JavaScript, PHP Tutorials: http://www.w3Schools.com

Additional materials will be made available via Blackboard.

Course description:
Wide spread use of Web servers for hosting web sites and other popular applications, such as social media, games and clouds, has spurred an unprecedented demand for software developers that fully understand the technical issues involved in architecting, implementing and programming cutting-edge Web applications, as well as the underlying Web server technology. In fact, based on Computerworld's Forecast 2017 survey of 196 IT managers, directors and executives, web development has been identified as one of the top 10 hot skills, that they plan to hire for in the next 12 months. This unprecedented demand has created a great career opportunity for the students in the EECS Department, and this course is designed to help students meet that demand. More specifically, this course covers the follow topics: How the Web Works; Network Concepts; Java Network/Socket Programming; Java Thread Programming; HTTP; Apache HTTP/Web Server; HTML5; JavaScript, including jQuery, AJAX, and node.js; PHP; Java Servlets and JSP (Java Server Pages).

Class Schedule:

Week 1: Pre-Test: Java Programming (January 17): 5 points

How the Web Works (January 17)

Week 2: Basic Network Concepts (January 22)

Network Programming in Java (January 24)

Week 3: Sockets for Clients and Servers (January 29, 31)

*Assignment #1: Java Client-Server Computing (5 points), due **February 9***

Week 4: Java Streams (February 5)

Thread Programming in Java (February 7)

Week 5: Thread Programming in Java, continued (February 12)

HTTP (February 14)

*Assignment #2: Java HTTP Server (10 points), due **February 23***

Week 6: HTTP, continued (February 19)

HTML5, Part 1: The Basics (February 21)

*Assignment #3: HTML5 Programming (5 points), due **March 9***

Week 7: HTML5, Part 2: CSS, Tables and Forms (February 26)

JavaScript, Part 1: The Basics (February 28)

Week 8: JavaScript, Part 2: The DOM (Document Object Model) and Forms (March 5)

*Assignment #4: JavaScript Programming (10 points), due **March 23***

Mid-Term Exam (March 7): 30 points

Week 9: *Spring Break: March 11 - 18*

Week 10: JavaScript, Part 3: jQuery and AJAX (March 19, 21)

Week 11: PHP (March 26, 28)

*Assignment #5: Term Project Proposal (5 points), due **March 30***

Week 12: Working with Databases (April 2, 4)

Week 13: Java Servlets and JSP (April 9, 11)

Week 14: JavaScript, Part 4: JavaScript Frameworks, Node.js & AngularJS (April 16, 18)

Week 15: ***Term Project Presentations/Demonstrations (April 23, 25 & 30)***

Term Project Deliverables: due May 6, 2018

A zipped folder that contains the following:

- The PowerPoint presentation
- A report that describes your system architecture, features, components, data, experimental results and analysis, plus anything else that you think worth mentioning. Minimum 2 pages per team member. Single-spaced, with fonts no larger than 12 points.
- Source code (with **comments**), data files, URL links, etc.
- A README file that describes how to install, run and use your system. If your code is available online, please mention the URL in the README file.

Prerequisites: Proficiency in Java programming

Grading:

Attendance: Mandatory. -1 for missing each class without good excuses.
Pre-Test (Java Programming): 5 points
Assignments: 35 points
Mid-Term Exam: 30 points
Term Project Deliverables (as described at the beginning of this page): 30 points
(presentation: 10 points; report + README: 10 points; code + comments, etc.: 10 points)

Note: A grade of incomplete will not be given, except under very extenuating circumstances and at the discretion of the Instructor.

Attendance:

Attendance in class is very important. During each lecture period, information regarding assignments, due dates, explanation and clarification of assignments, and material that is not covered in the textbooks will be presented. If you miss a class for any reason, it is your responsibility to become familiar with the missed material. Obtaining a copy of the class notes of a fellow student is recommended in such cases. (My own slides will be uploaded to Blackboard.) Be prepared to spend extra time each week on this class, outside of the classroom.

Academic Integrity:

"Syracuse University's academic integrity policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The university policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same written work in more than one class without receiving written authorization in advance from both instructors. The presumptive penalty for a first instance of academic dishonesty by an undergraduate student is course failure, accompanied by a transcript notation indicating that the failure resulted from a violation of academic integrity policy. The presumptive penalty for a first

instance of academic dishonesty by a graduate student is suspension or expulsion. SU students are required to read an online summary of the university's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice. For more information and the complete policy, see http://academicintegrity.syr.edu."

Faith Tradition Observances:

Syracuse University recognizes the diverse faith traditions represented among its campus community and supports the rights of faculty, staff, and students to observe according to these traditions.

Faculty are asked to make appropriate accommodation for students' observance needs by providing an opportunity to make up any examination, study, or work requirement that is missed because of an absence due to a religious observance, provided the instructor has been notified no later than the end of the second week of classes. No fees will be charged to the student for the costs incurred by the University for such make-up work. If a faculty member is unwilling or unable to make an appropriate accommodation, the student should consult his or her academic dean. SU's religious observances policy can be found at: http://supolicies.syr.edu/emp_ben/religious_observance.htm.

Disability Services:

If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), http://disabilityservices.syr.edu, located in Room 309 of 804 University Avenue, or call (315) 443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

Syracuse University and I are committed to your success and to supporting Section 504 of the Rehabilitation Act of 1973. This means that in general no individual who is otherwise qualified shall be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity, solely by reason of having a disability. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations.