Florida Atlantic University
Department of Computer and Electrical Engineering and Computer Science (CEECS)
COP 4854 – Cutting-Edge Web Technologies
Summer 2017
Credit Hours: 3

Instructor: Oge Marques, PhD – Professor
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Office Hours: by appointment only
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Teaching Assistant Contact Information (if applicable) – N/A
Program Admin: N/A

Course Prerequisites: *COP 3530 and COP 3813 (strictly enforced).*
Course Co-requisites: *N/A.*
Placement in Program: *elective undergraduate-level course for Computer Science and Computer Engineering students. May be used as graduate-level course for Computer Science and Computer Engineering students (subject to advisor's approval). Open to undergraduate- and graduate-level students from other majors/colleges.*
Other Designations: *N/A.*

Course Description
Catalog description: *To develop hands-on knowledge of the latest web development tools, languages and models. Students will develop projects consisting of innovative Web-based solutions. Topics include: characteristics and foundations of Rich Internet Applications (RIAs), server-side technologies and languages, client-side technologies and languages, usability and human factors, and content sharing tools and technologies.*

Required Text and Materials: *none*

Suggested (optional) Materials

> *Additional books, tutorials, online courses, and resources whose details will be provided during the semester.*

Course Delivery Mode
This is a fully online course accessible only through FAU's learning management system—**Blackboard**. You must log into Blackboard (https://bb.fau.edu/webapps/login/) with your FAU ID and Password to access the materials and assignments in this course.
> If you do not know your FAU ID or Password click the following link for help.
> http://www.fau.edu/oit/accounts/index.php

The course is organized into units with dates provided for each unit. The course begins with a START HERE unit that will familiarize you with the organization and navigation of the course. Units will be made available as the semester progresses. Each unit contains (links to) reading materials, PowerPoints, and other materials relevant to the corresponding topic, including your assignments for that unit.

Computer Requirements
- Operating System
    - A computer that can run Mac OSX or Windows 8 or higher

- Peripherals
    - A backup option should be available to minimize the loss of work. This can be an external hard drive, a USB drive, cloud storage, or your folder on the FAU servers.

- Software
    - Please visit the Students tab in Blackboard located at the top of each Blackboard page for LMS compatibility with your computer. Make sure your Internet browser is compatible and that you have all the recommended plug-ins installed.
    - Other software may be required for specific learning units and/or modules, but the links to download and install it will be provided within the applicable unit and/or module.

Required Technical Skills

To be successful in this course you should be familiar with and be able to execute the following technological skills:

- Creating and posting to a discussion board, blog, or Wiki
- Combining files into a compressed (ZIP) file
- Submitting zipped files containing your assignments through Blackboard
- Attaching documents
- Copy and paste functions
- Microsoft Office tools: Word, PowerPoint, Excel
- Searching the FAU library and other useful websites

Course Objectives/Student Learning Outcomes

Upon successful completion of this course, students will be able to:
1. Identify the key components, design principles, and technologies behind successful contemporary web-based applications.
2. Design web-based applications using the latest tools, technologies, languages, frameworks, and best practices.
3. Demonstrate a solid conceptual understanding of the main standards and technologies associated with contemporary web-based applications.
4. Contrast and compare modern languages, frameworks, and tools used to build web-based solutions.
5. Design mobile applications using contemporary tools and frameworks.

Assessments for this course include:

Introductions and syllabus quiz: 5 points

You will post an introduction in the student introductions discussion board and take a syllabus quiz. The syllabus quiz can be taken as many times as necessary to achieve 100%.

Participation: 5 points

You will be encouraged to post regularly on the discussion board forums. Frequent and meaningful posts will lead to a 100% participation grade.

Course Assignments (Projects)

- *There will be **four (4) hands-on projects,** as follows:*
    1. Professional portfolio / resume using HTML 5, CSS, Bootstrap, JavaScript, and jQuery
    2. Web-based app using Angular.js
    3. Web-based app using the entire MEAN stack (MongoDB, Express.js, Angular.js, and Node.js)
    4. Mobile app using the Ionic framework
- *There will be **no quizzes or exams**.*

Your final grade will be based on the following weighted distribution.

Syllabus quiz	5%
Participation	10%
Project 1	20%
Project 2	20%
Project 3	25%
Project 4	20%

Grade Scale:

Total points	100-93	92-90	89-87	86-83	82-80	79-77	76-73	72-70	69-67	66-63	62-60	<60
Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

Course Schedule

UNITS	DATES	TOPIC	READ/LISTEN/VIEW	TO DO
START HERE	5/16 – 5/19	Introduction to Course	Syllabus Course Schedule Instructor Introduction	• Post student intro (due May 19) • Orientation / Syllabus Quiz (due May 19)
1	5/20 – 5/22	Tools	Required reading (TBA) Selected web sites	*Note*: Last day to drop the class without any consequences: **May 21**
2	5/23 – 5/27	Quick review of client-side development foundations	Required reading (TBA) Selected web sites **Project 1** guidelines	
3	5/28 – 6/1	Advanced HTML5	Required reading (TBA) Selected web sites	
4	6/2 – 6/8	Advanced JavaScript and jQuery	Required reading (TBA) Selected web sites	Project 1 (due June 6)
5	6/9 – 6/15	MEAN stack – Part 1: Angular.js	Required reading (TBA) Selected web sites **Project 2** guidelines	
6	6/16 – 6/18	MEAN stack – Part 2: Real-time web with Node. js	Required reading (TBA) Selected web sites	Project 2 (due June 18)
7	6/19 – 6/23	MEAN stack – Part 3: Web APIs using Express.js	Required reading (TBA) Selected web sites	
8	6/24 – 7/2	MEAN stack – Part 4: NoSQL and MongoDB	Required reading (TBA) Selected web sites **Project 3** guidelines	
9	7/3 – 7/22	Mobile app development	Required reading (TBA) Selected web sites **Project 4** guidelines	Project 3 (due July 6)
10	7/23 – 8/8	Looking ahead	Required reading (TBA) Selected web sites	Project 4 (due July 27) *Note*: Last day to drop the class without receiving an 'F' in the course: **July 31**

Attendance, Makeup Test, Late Work, and Incomplete Policy

Late Assignments Policy *(strictly enforced)*
Late assignments will be graded with a penalty of 10% of the grade for each day after the assignment's due date, up to a maximum of 3 days late (i.e., 30% penalty), beyond which the assignment will receive a grade 0 (zero).

Online Attendance Policy
Since this course is delivered online, you are expected to access the course **at least three times per week** to ensure you do not miss pertinent postings, messages, or announcements. It is imperative that you meet course deadlines and stay active in discussion boards, group projects, etc. If you are experiencing major illnesses, absences due to university duties, or other large-scale issues, contact the instructor immediately to formulate a resolution (if possible).

Classroom Etiquette Policy/Netiquette
Due to the casual communication common in the online environment, students are sometimes tempted to relax their grammar, spelling, and/or professionalism; however, remember you are adult students and professionals—your communication should be appropriate. You are expected to use correct spelling and grammar and write in complete sentences. Also, please note that in the online environment you do not have the advantage of voice inflection or gestures. As a result, sarcasm can come across very negative, so this form of communication should be avoided. When conducting peer reviews or responding to classmates' posts, remember that you are responding to the ideas of the writer: keep your communication professional and on-topic.

Communication Policy

- Announcements
    - You are responsible for reading all announcements posted by the instructor. Check the course announcements each time you log in to be sure you have read all of them since your last login session.
- Course-related Questions
    - Post course-related questions to the FAQ discussion board. Asking course-related questions in this way allows other participants with the same question to benefit from the responses. Also, make sure you review this forum prior to posting a question; it may have already been asked and answered in previous posts. Except Saturdays, Sundays, and holidays, questions will, generally, be answered by the instructor within 48 hours.

- Email Policy
    - Except for Saturdays, Sundays, and holidays, instructor typically, will respond to messages within 48 hours. Such messages should only be used to communicate personal or confidential matters; otherwise, please use the FAQ discussion board within the course.

- Assignment Feedback Policy
    - Feedback will be provided on submitted assignments within one week of the submission date. Some assignments may require a longer review period, which will be communicated to you by your instructor.

Technical Problem Resolution Procedure

In the online environment, there is always a possibility of technical issues (e.g., lost connection, hardware or software failure). Many of these can be resolved relatively quickly, but if you wait until the last minute before due dates, the chances of these glitches affecting your success are greatly increased. Please plan appropriately. If a problem occurs, it is essential you take immediate action to document the issue so your instructor can verify and take appropriate action to resolve the problem. Please take the following steps when a problem occurs:

1. Contact the eSuccess Advisor, Eduardo Santiago for assistance
   Edwardo Santiago - eLearning Success Advisor - 561-297-3590 or esantia5@fau.edu
2. If you can, make a Print Screen of the monitor when the problem occurs. Save the Print Screen as a .jpg file. If you are unfamiliar with creating a Print Screen file, visit http://en.kioskea.net/faq/141-print-screen-screen-capture-windows-mac-os-x-and-unix-linux.
3. Complete a Help Desk ticket http://helpdesk.fau.edu/. Make sure you complete the form entirely and give a full description of your problem so the Help Desk staff will have the pertinent information in order to assist you properly. This includes:
   a. Select "Blackboard (Student)" for the Ticket Type.
   b. Input the Course ID.
   c. In the Summary/Additional Details section, include your operating system, Internet browser, and Internet service provider (ISP).
   d. Attach the Print Screen file, if available.
4. Send an email to your instructor with all pertinent information of the incident (3b-d above).
5. If you do not have access to a computer, call your instructor with all pertinent information of the incident. If he/she is not available, make sure you leave a detailed message.
6. If you do not hear back from the Help Desk or your instructor within a timely manner (48 hours), it is your responsibility to follow up with the appropriate person until a resolution is obtained.

Selected University and College Policies

Support Services and Resources

Office of Information Technology Online Help Desk:	http://helpdesk.fau.edu
eLearning Student Success Advisor- Eduardo Santiago	esantia5@fau.edu
FAU Ombuds (Ask a question about University related issues)	Twitter @FAUOmbuds ombuds@fau.edu
Academic Advising Services:	http://www.fau.edu/freshmanadvising
FAU Libraries Website:	http://www.fau.edu/library
Center for Learning and Student Success Website:	http://www.fau.edu/class
University Center for Excellence in Writing:	http://www.fau.edu/UCEW
Math Learning Center:	http://www.math.fau.edu/MLC
Office of Undergraduate Research and Inquiry:	http://www.fau.edu/ouri
Office for Students with Disabilities Website:	http://osd.fau.edu/
Office of International Programs and Study-abroad:	www.fau.edu/goabroad

Disability Policy Statement
In compliance with the Americans with Disabilities Act (ADA), students who require special accommodations due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) located in Boca Raton SU 133 (561-297-3880), in Davie - LA 240 (954-236-1657), in Jupiter - SR 110 (561-799-8585) and follow all OSD procedures. http://osd.fau.edu/

Code of Academic Integrity Policy Statement
Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001.

Plagiarism is unacceptable in the University community. Academic work that is submitted by students is assumed to be the result of their own thought, research, or self-expression. When students borrow ideas, wording, or organization from another source, they are expected to acknowledge that fact in an appropriate manner. Plagiarism is the deliberate use and appropriation of another's work without identifying the source and trying to pass-off such work as one's own. Any student who fails to give full credit for ideas or materials taken from another has plagiarized. This includes all discussion board posts, journal entries, wikis, and other written and oral presentation assignments. If in doubt, cite your source!

Religious Accommodation Policy Statement
In accordance with rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices and beliefs with regard to admissions, registration, class attendance and the scheduling of examinations and work assignments. For further information, please see Academic Policies and Regulations.

University Approved Absence Policy Statement
In accordance with rules of the Florida Atlantic University, students have the right to reasonable accommodations to participate in University approved activities, including athletic or scholastics teams, musical and theatrical performances and debate activities. It is the student's responsibility to notify the course instructor at least one week prior to missing any course assignment.

Incomplete Grade Policy Statement
A student who is passing a course, but has not completed all work due to exceptional circumstances, may, with consent of the instructor, temporarily receive a grade of incomplete ("I"). The assignment of the "I" grade is at the discretion of the instructor, but is allowed only if the student is passing the course.

The specific time required to make up an incomplete grade is at the discretion of the instructor. However, the university policy on the resolution of incomplete grades requires that all work required to satisfy an incomplete ("I") grade must be completed within a period of time not exceeding one calendar year from the assignment of the incomplete grade. After one calendar year, the incomplete grade automatically becomes a failing ("F") grade.

Withdrawals

Any student who decides to drop is responsible for completing the proper paper work required to withdraw from the course.

Grade Appeal Process

A student may request a review of the final course grade when s/he believes that one of the following conditions apply:

- There was a computational or recording error in the grading.
- Non-academic criteria were applied in the grading process.
- There was a gross violation of the instructor's own grading system.
- The procedures for a grade appeal may be found in Chapter 4 of the University Regulations.

Disruptive Behavior Policy Statement

Disruptive behavior is defined in the FAU Student Code of Conduct as *"... activities which interfere with the educational mission within classroom."* Students who behave in the face-to-face and/or virtual classroom such that the educational experiences of other students and/or the instructor's course objectives are disrupted are subject to disciplinary action. Such behavior impedes students' ability to learn or an instructor's ability to teach. Disruptive behavior may include, but is not limited to: non-approved use of electronic devices (including cellular telephones); cursing or shouting at others in such a way as to be disruptive; or, other violations of an instructor's expectations for classroom conduct.

Faculty Rights and Responsibilities

Florida Atlantic University respects the right of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions which do not impede their exercise. To ensure these rights, faculty members have the prerogative:

- To establish and implement academic standards
- To establish and enforce reasonable behavior standards in each class
- To refer disciplinary action to those students whose behavior may be judged to be disruptive under the *Student Code of Conduct*.

Instructor reserves the right to adjust this syllabus as necessary.