CMPT 661 – Web Development

Syllabus and Course Admin

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Outline for Today

- Course introduction
- Grading
- Policies

About the Instructor

- **Dr. Abdelkarim Erradi**
  - **Office:** Office 132 Female Engineering Building
  - **Phone:** 4403 4254

  Office hours:
  - **Thursday 4pm to 5pm** at CSE meeting room
  - Other times are available **by appointment**
  - You can talk to me **after** class if you have issues/questions
  - **Best way to contact me is by Email**

    erradi@qu.edu.qa

Course Goals (1 of 2)

1. Introduce the principles and the technologies to design and develop Web applications

2. Provide students with the opportunity to design, build, test, and deploy Web applications using various client-side and server-side Web technologies

3. Employ state-of-the art application frameworks, middleware and development tools to build Web applications

Course Goals (2 of 2)

- Gain practical hands on experience with web-based technologies

  - Often, the best way to understand something is to build it yourself

  - Hands-on homework assignments

  - Project: Substantial implementation project to design and implement a Web Application

  => Put what you learned into use!

=> This is the closest you can get to experience how real world Web applications are designed and built

Why this Course?

- Web Applications are **critical applications** that **automate business processes** and **support the organization in achieving its goals**

- There are typically characterized by:

  - A large number of concurrent users. Hence they need to be **scalable**

  - Users often require fast response time

  - Mission critical hence they need to be **secure**, **reliable** and **highly available**

=> This course **equips you with the skills** and best practices needed to design and develop Web applications with the required quality attributes
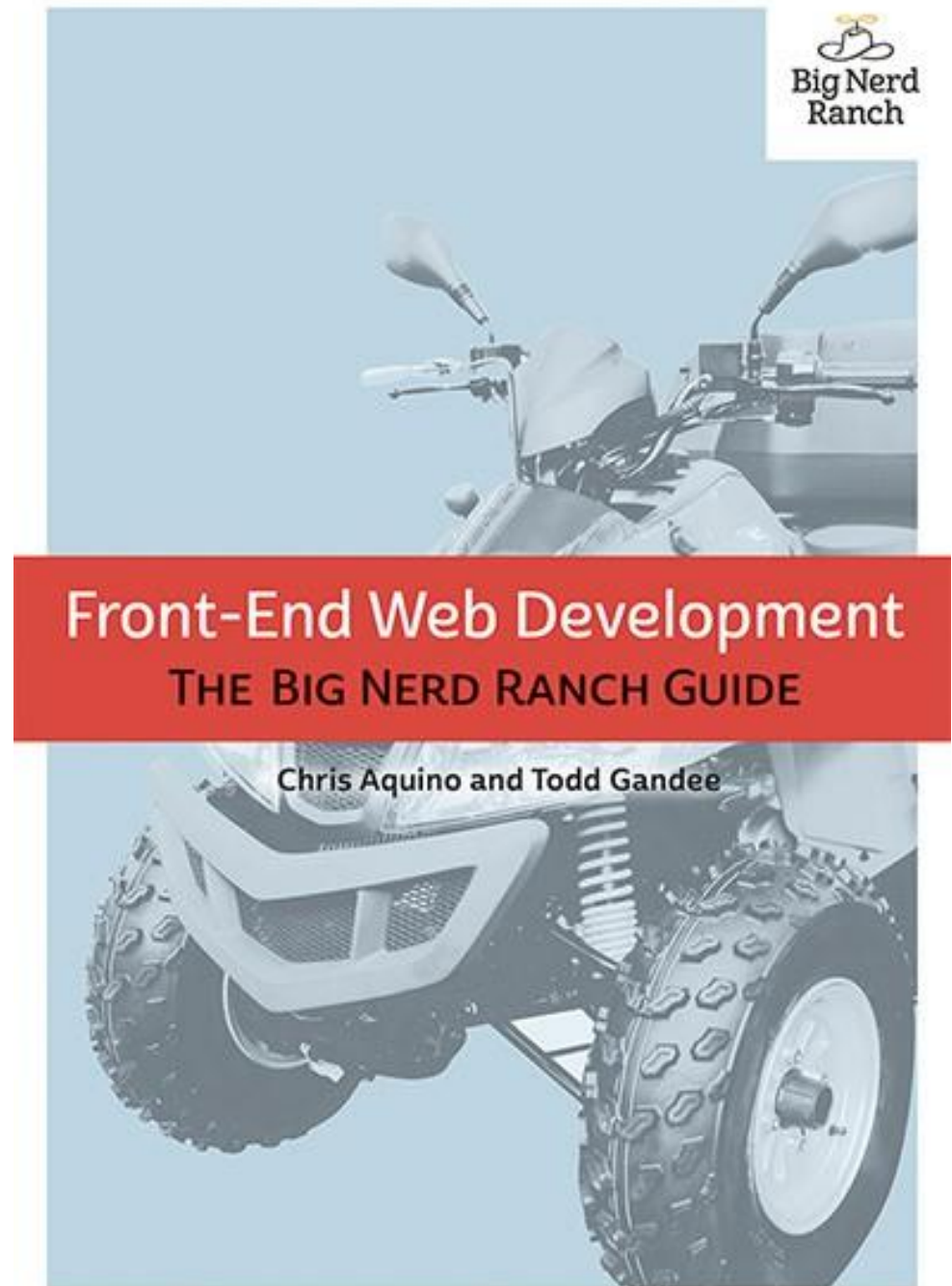
Topics	Chapter	Weeks
Web Interface Technologies: HTML, CSS & Bootstrap	3, 7 and 9	1
JavaScript	17 and 18	1
Ansynchronous JavaScript	14	1
Manipulating DOM using JavaScript	10, 11, 12 and 13	1
Server-side Development with Node.js	15	2
Data Access of a document-oriented database (e.g., MongoDB)	Online readings	1
Single-page application (SPA) using Angular / React / Vue		2
Hybrid Mobile-Web Apps using Ionic		2
Securing Web applications		2
Student presentations		1
Review & Exams	-	1
Total		15

Recommended Textbook

Chris Aquino and Todd Gandee

Front-End Web Development: The Big Nerd Ranch Guide, 1st Edition, 2016

Plenty of online resources I will be providing

Front-End Web Development
THE BIG NERD RANCH GUIDE

Chris Aquino and Todd Gandee

Big Nerd Ranch

Your Grade is Based on:

Assignments	20%	4 individual assignments
Review paper and presentation	10%	Group review and synthesize research papers and present the findings
Project	30%	3 Phases (group of 3 students): - Design and implement MVC-based Web application (10%) - Enhance it to a Single Page Application (SPA) using Angular + Data access (10%) - Enhance it to Hybrid Mobile-Web App using Ionic (10%)
Midterm exam	20%	Theory (8%) & Practical (12%)* - week 8
Final exam	20%	Theory (8%) & Practical (12%)* - Consult University exam timetable

*Students who get less then 50 marks out of 100 in the Practical Midterm/Final we get their project's grade reduced to half of the group grade

How to succeed in this course….

❑ Do your weekly assigned readings

❑ **Read the slides before you come to the class**

❑ **Exercise a lot – study as many examples as possible**

   − Understand and enhance the examples I provide as well as the ones in the textbook and the ones in the provided resources

❑ **Attend and participate in class**

   ❑ **Many of the exam questions are from the class explanation**

❑ Do all the assignments and project **yourself.** Actively contribute to your project.

❑ Seek help when needed and ask questions (and do it EARLY): During Lectures/Labs & Come to office hours

We learn swimming by **swimming** and we learn design and programming by **practicing it!**

Software we will use

- WebStorm - request your free student license at
https://www.jetbrains.com/student/
(Webstorm is one of the leading JavaScript, HTML and Web IDE)

- GitHub
- Node.js

- For modeling we will use **Visual Paradigm**
https://ap.visual-paradigm.com/qatar-university/license.jsp
- Other tools will be communicated to you as we go

GitHub will be used to deliver content, assignments an projects

Check https://github.com/cmpt661f17 *regularly!*

Lecture slides, Demos and Assignments posted are there!

Communications will be by email

Important Notes

- Attendance… QU attendance policies will be enforced

  – Do not miss classes/labs

- **Start your assignments early!!!**

- This is a master course and students are expected to learn independently as much as needed in order to complete the course requirements

  – Do not expect me to find/fix your code bugs

  – Do not expect me to find and fix your technical issues

  – I can only give you high level suggestions and guidance

No 'Free Riding' allowed

- 'free riders' (who do not contribute much to group work) => not acceptable and not fair for hardworking students
    - You must actively contribute to your project and do your ultimate best to deliver the best possible results
    - Otherwise you will be asked to do the project alone

Plagiarism / Cheating

- "Getting an unfair academic advantage"
  - Using other people's work as your own
  - Not doing your assignments yourself

- All the code you submit has to be your own
  - Only exception: Code I have provided or explicitly authorized
  - **NO** code you have found on the web. **NO** sharing with others.

- **Do your homework and project yourself**
  - Do NOT copy from each other or from the Internet - **I will know it!**
  - You can be picked-up randomly to explain your implementation
  - Cheating will be treated very seriously

- Penalties START with a zero on the assignment, failing the course! and other disciplinary actions as per QU policy

Email Rules

- When emailing me you must add – **CMPT 661** to the beginning of the email title

e.g., CMPT 661 – Request for a meeting

- I will reply to CMPT 661 emails within 24 hours

- For **guidance** on technical issues come to office hours NOT by email

To do before next class

- Email me your team members (StudentID and Student Name)

- Install the required software (see the email I have sent you)

- Register for GitHub and Piazza

- Prepare any questions you might have

I wish you a fruitful and enjoyable journey!