# 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 3:30pm 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

- **TA is Abdulahi Mohamed Hassen**
  **abdulahi@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
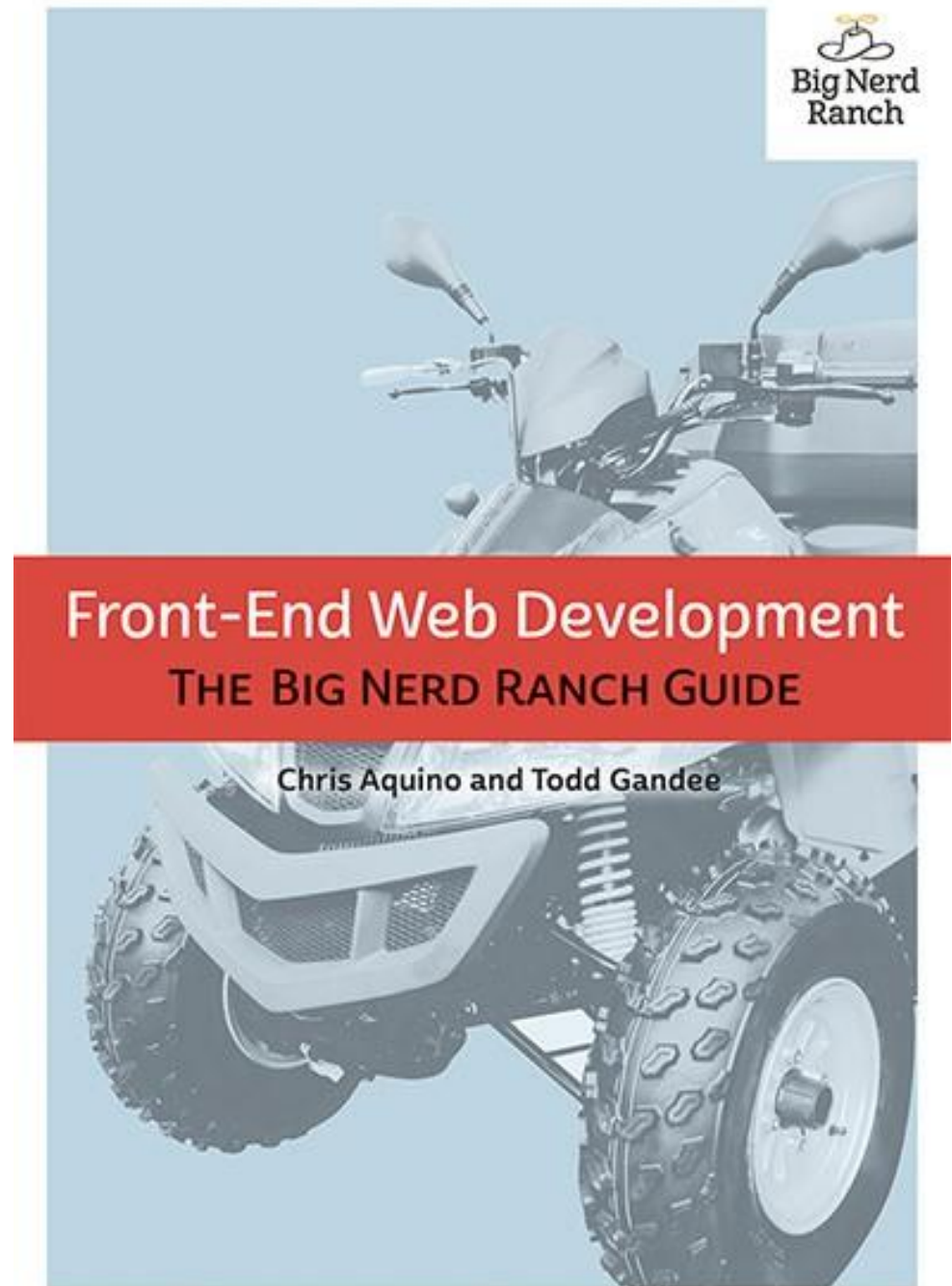
| Topics | Chapter | Weeks |
|---|---|---|
| Web Interface Technologies: HTML, CSS & Bootstrap | 3, 7 and 9 | 1 |
| JavaScript | 17 and 18 | 1 |
| Ansynchronous JavaScript | 14 | 1 |
| Manipulating DOM using JavaScript | 10, 11, 12 and 13 | 1 |
| Server-side Development with Node.js | 15 | 2 |
| Data 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**

# Your Grade is Based on:

| | | |
|---|---|---|
| Assignments | 24% | 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):<br>- Design and implement MVC-based Web application (10%)<br>- Enhance it to a Single Page Application (SPA) using Angular + Data access (10%)<br>- Enhance it to Hybrid Mobile-Web App using Ionic (10%) |
| Midterm exam | 18% | Theory (8%) & Practical (10%)* - week 8 |
| Final exam | 18% | Theory (8%) & Practical (10%)* - 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!**