COM 388, Introduction to Web Programming

American University of Central Asia
Software Engineering Department

1 Course Information

Course ID
COM 388, 2805, 3040

Course Repositories
`https://github.com/auca/com.388`

Place
AUCA, laboratory G31

Time
Tuesday 10:50
Thursday 10:50

2 Prerequisites

COM 112, Programming II

3 Contact Information

Instructor
Toksaitov Dmitrii Alexandrovich
toksaitov_d@auca.kg

Office
AUCA, Room 315
AUCA, Media Laboratory

Office Hours
Monday 12:45–17:00
Tuesday 15:35–17:00
Thursday 12:45–17:00
Friday 12:45–17:00

4 Course Overview

This course teaches students to master tools and techniques to develop web applications. Students will study basic networking concepts focusing on The Hypertext Transfer Protocol (HTTP), the foundation of data communication for the World Wide Web. Students will learn the HyperText Markup Language (HTML) and Cascading Style Sheets (CSS) to describe and style content of their web documents. The course introduces students to the JavaScript programming language for both front-end and back-end development with a brief introduction to other popular languages, environments, and frameworks. Last but not least, students will take a look on how to configure a web server, work with relational and non-relational databases, scale their sites, and use cloud services.

5 Topics Covered

- Preparing a development environment
- Network fundamentals
- The HyperText Markup Language
- Cascading Style Sheets
- The JavaScript programming language and the Node.js runtime
- Relational and non-relational databases
- Authorization, authentication and security
- Caching and scaling up
- Containerization
- Publishing web applications
- Cloud services

6 Practice Tasks & Quizzes

Students are required to finish 4 practice tasks. The tasks are based on topics discussed during lectures. Each task should be finished during the class to receive a grade.

Students will get four quizzes throughout the course on topics discussed during classes.

7 Course Project

Students will take one course project to develop a web application for an imaginary customer. Students are free to select languages, frameworks, database systems, and other tools they like or would like to try.

8 Reading

1. HTML & XHTML: The Definitive Guide, 6th Edition by Chuck Musciano, Bill Kennedy (ISBN: 978-0596527327)
2. CSS: The Definitive Guide, 3rd Edition by Eric A. Meyer (ISBN: 978-0596527334)
3. JavaScript: The Definitive Guide: Activate Your Web Pages by David Flanagan (ISBN: 978-0596805524)
4. JavaScript: The Good Parts by Douglas Crockford (ISBN: 978-0596517748)

8.1 Supplemental Reading

1. Design Patterns: Elements of Reusable Object-Oriented Software by Erich Gamma, Richard Helm, Ralph Johnson, John Vlissides (AUCA Library Call Number: QA 76.64 D47 1995, ISBN: 978-0201633610)
2. Refactoring: Improving the Design of Existing Code by Martin Fowler, Kent Beck, John Brant, William Opdyke, Don Roberts (AUCA Library Call Number: QA76.76.R42 F695 1999, ISBN: 978-0201485677)

9 Grading

- Practice tasks (30%)
- Quizzes (20%)
- Course project (50%)

  - 90%–100%: A
  - 80%–89%: A-
  - 70%–79%: B+
  - 65%–69%: B
  - 60%–64%: B-
  - 56%–59%: C+
  - 53%–55%: C
  - 50%–52%: C-

- 46%–49%: D+
- 43%–45%: D
- 40%–42%: D-
- Less than 39%: F

10 Rules

Students are required to follow the rules of conduct of the Software Engineering Department and American University of Central Asia.

Team work is NOT encouraged. Equal blocks of code or similar structural pieces in separate works will be considered as academic dishonesty and all parties will get zero for the task.