



Kuwait University  
College of Business Administration  
Information Systems and Operations Management  
Department



## Course Syllabus- Spring 2025

**ISOM 452: Web Application Development (WAD) – (3 Credits)**

**Dr. S. Zamoon**

**Final Exam May 19<sup>th</sup>, 2025 11:00 am – 1:00 pm**

### Lecture Time and Location

Section 01A Monday, Wednesday (11:00 AM– 12:150 PM) – Room C2-1003

### Contact Information

**Email** [DrZamoon@gmail.com](mailto:DrZamoon@gmail.com)<sup>1</sup>  
**Office** Room # B2-1025 (South Building)  
**Office Hours** Mon/ Wed 12:30 pm- 1:45 pm (in person and virtual appointments welcome)

**Teaching Assistant** T.A. Nouf Aloraifan  
**Email** [nouf.aloraifan@ku.edu.kw](mailto:nouf.aloraifan@ku.edu.kw)  
**Lab Schedule** Sunday (2:00 PM- 3:50 PM)- Room TBA  
**Office Hours** X, Room A2-10XX

### Required Material:

#### Textbook

R. Connolly and R. Hoar, *Fundamentals of Web Development*, 3<sup>rd</sup> Edition, Pearson Education, 2021.



**You need a physical copy of the textbook for exams; no digital copies can be used**

#### Other Material

Slides, cases, articles, videos, and assignments will be on the Moodle.

#### Course Website Presentations

Microsoft Teams/ Moodle (for announcements, materials, assignments).  
Daily discussions and presentation of project.

#### Tools to be Used

E-Plagiarism systems (Turnitin: [www.turnitin.com](http://www.turnitin.com)) and AI detection tools.

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Email is the best way to contact me, NOT MS TEAMS Chats. I check email between 8:00 am and 1:00 pm, but not on weekend or holidays.

### Course Description:

The purpose of this course is to introduce students to the fundamentals of web application development and deployment. Students will be introduced to the main standards and technologies used to power contemporary front-end and back-end web applications. Through practical experience, students will be introduced to the challenges of designing, building, deploying modern web applications and service-based infrastructures. Students will also develop an appreciation of the challenges that face business in maintaining a web application infrastructure.

### Course Learning Objectives (CLOs)

Upon successful completion of the course, students will be able to:

- CLO1.** Differentiate between the different types of web applications and services [LG5].
- CLO2.** Use prototyping tools to mock up a web application user experience [LG5].
- CLO3.** Develop and deploy static and dynamic web applications.
- CLO4.** Design and deploy web infrastructures that power static and dynamic web applications.
- CLO5.** Use contemporary web frameworks to build web applications and services [LG5].
- CLO6.** Understand the security challenges present in modern web applications and how to manage them.

### CLO Mapping to CBA Skill Based Competency Goals<sup>2</sup>

CLO	Competency Goal			
	Analytical	Communication	Information Technology	Business Ethics
1			R	
2			A	
3	I		A	
4	I		A	
5	I	R	A	
6			R	

### Type of Emphases:

- **(I)ntroduce:** Students will be introduced to the skill and their grasp of it assessed in the course.
- **(A)pply:** The course will not cover the skill. Students should have a high-level grasp of the skill and are required to apply it in the course.
- **(R)einforce:** Students should have an introductory-level grasp of the skill and the course will improve their mastery to a higher level.

<sup>2</sup> CBA Competency Goals can be found at the end of this document.

## Course Outline

Subject	Key Topics	Resources
<b>Introduction</b>	Introduction to web development How the web works	Chapter 1 Chapter 2
<b>Hypertext Markup Language (HTML)</b>	Introduction to HTML Tables and forms	Chapter 3 Chapter 5
<b>Cascading Style Sheets (CSS)</b>	Selectors and basic styling Bootstrap CSS framework Layout	Chapter 4 External resources (Philips Textbook Slides Chapter 3) Chapter 7
<b>JavaScript</b>	Language fundamentals JavaScript basic features JavaScript additional features	Chapter 8 Chapter 9 Chapter 10 (depending on time)

## Grading and Course Requirements

- Students must check the course websites for class information regularly and make sure push notifications are enabled. You are responsible for any information posted.
- All dates (except for the final) may change due to class circumstances and holidays.
- **Interviews / Oral Questions will be used after Quizzes and Project Milestones to assess student learning of coding and will be used as 50% of the grading.**

Weight	Category	Description
<b>40%</b>	<b>Quizzes</b>	Tentatively five practical and theoretical quizzes given during regular lectures or lab sessions. The lowest quiz score will be dropped. Dates will be announced later.
<b>10%</b>	<b>Lab Assignments</b>	Practical assignments given through the lab sessions. The lowest assignment score will be dropped. Dates and details will be announced later.
<b>20%</b>	<b>Project</b>	A set of project deliverables (milestones) plus the final project report and presentation. Dates and details will be announced later.
<b>40%</b>	<b>Final Exam</b>	<b>Date/Time: Monday May/19/2025 (11:00 AM).</b>
<b>5%</b>	<b>Attendance, Participation, and Bonuses</b>	Various methods
<b>115%</b>	<b>TOTAL</b>	<b>Bonuses = NO curve for the course; cut offs are STRICT- NO Rounding up or down</b>

**Grade Distribution**

Grade	Range
A	$\geq 95$
A-	$\geq 90$ and $< 95$
B+	$\geq 87$ and $< 90$
B	$\geq 83$ and $< 87$
B-	$\geq 80$ and $< 83$
C+	$\geq 77$ and $< 80$
C	$\geq 73$ and $< 77$
C-	$\geq 70$ and $< 73$
D+	$\geq 65$ and $< 70$
D	$\geq 60$ and $< 65$
F	$< 60$

**Important Dates Instructor will NOT remind you of these dates**

Date	Event
Assessments	
Bonus 1% Due by Feb 11 @ 23:59	Syllabus Quiz
Feb 24 in class	Quiz 1
Mar 3 in class	Quiz 2
Apr 7 in class	Quiz 3
May 5 in class	Quiz 4
May 12 in class	Quiz 5
Project Deliverables	
Apr 6 @ 23:59	Milestone 1 4%
Apr 19 @ 23:59	Milestone 2 4%
May 3 @ 23:59	Milestone 3 4%
May 11 @ 23:59	Milestone 4 4%
May 14 @ 23:59	Milestone 5 4%
Mar 15	Last day to withdraw
Bonus 1% Due by May 18 @ 23:59	Pre-Final Quiz
<b>Monday May/19/2025 (11:00 AM)</b>	<b>Final Exam</b>

**Quizzes**

Quizzes will be given at the beginning of class. Quiz questions (both practical and theoretical) are a good reflection of what the final exam questions will look like. I will drop the lowest quiz score you get from your total quizzes grade. The total quizzes grade is worth 40% of your final grade. The quiz dates will be announced later. **Students are expected to be on time, students will NOT be allowed to take the quiz if late to lecture.**

**Final Exam**

The final exam is worth 40% of your final grade. Please be advised that no test banks will be used in the development of the final exam. If you have a test bank, you can use it as a personal evaluation of your learning and in solving homework. Do not rely on it to prepare for the exams.

**Identification:** You must bring and display a valid Kuwait University student ID to the examinations.

**Late Arrival:** If you arrive late for an examination, you will be given the remaining amount of time to complete your examination. However, after the first student hands in her/his examination, late students cannot start the examination. These late students will receive a zero grade in the final exam.

**Questions during the examination:** You are not allowed to ask questions about the exam content during the examination, unless you feel that there is a typographical error. Reading and understanding the question is part of the exam. If you need to make any assumptions, then make sure to clearly write those assumptions in your response.

**Note:** Working on your examination after time has already ended is not allowed and will lead to you earning ZERO on your exam grade.

## Project

The course includes a group assignment that is worth 20%. Your instructor will grade the project for technical and writing/ presenting aspects. The objective of this project is to allow students to apply conceptual and methodological tools (HTML, CSS, and JavaScript) learnt in class to develop, and deploy a full website with more focus on the front end. In addition to the technical “programming/ code” requirement ,each group will complete a report and a presentation. The objective is to propose, design, and build a website using the tools we learn in class. This could be any interactive web application, depending on your interests and the scope you decide. The project is broken down into five mini reports at various milestones. These reports will cover everything from your initial concept and design plans to the technical challenges you overcame during development. The final deliverable will be a fully functional website along with comprehensive documentation of your development process. The scope of this project is not just on the final product, but also on the educational journey. **Documenting your process, challenges, and solutions is crucial. Each team will be given a notebook for weekly notes and comments. The notebook should be rotated where you annotate the steps you took/ challenges faced/ how solutions were arrived at.**

**Students must complete the project to pass the course. THE USE OF AI TOOLS WILL EARN YOU A ZERO ON THE PROJECT. We will discuss group vs. individual grades of the project in class.**

### Milestone #1. Project Proposal and Conceptual Design

This document should outline the proposed website concept, its target audience (users), and the problem it aims to solve or the need it fulfills. This should include a high-level overview of the website’s structure, main features, and functionality.

### Milestone #2. Technical Specification and Design Planning

This document should contain a detailed technical specification, including the technologies to be used (HTML, CSS, JavaScript, any frameworks), the website architecture, and detailed wireframes<sup>3</sup> or mockups of each page. This should include in-depth planning of the website’s structure, page layout and design elements, and introduction to responsive design considerations such as using media queries, flexible elements (e.g., flexbox and grid layouts or using classes from CSS frameworks such as Bootstrap). Also, briefly list the page interactivity requirements such as user input validation and error notification.

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A wireframe is a two-dimensional illustration of a page's interface that specifically focuses<sup>3</sup> on space allocation and prioritization of content, functionalities available, and intended behaviors ([usability.gov](https://www.useit.com/learn/wireframes/)).

### **Milestone #3. Prototype Development**

This document should contain an initial prototype of the entire website. This should include basic functionality and design elements, focusing on HTML structure and CSS styling. Make sure your page style follows common styling practices and usability considerations (refer to section 5.6 – Styling and designing forms).

### **Milestone #4. Interactivity Enhancement**

This document should include enhanced version of the website with interactive elements. This includes enhancing user experience using JavaScript for form submission, user input validation, and error notification.

### **Milestone #5. Final Presentation and Documentation**

This deliverable has THREE PARTS: the report, the final version of the website, and a PPT presentation with embedded video where EVERY person on the team contributes to the presentation. The comprehensive report should include revised details of the previous milestones in addition to documenting the development process, challenges faced, solutions implemented, and lessons learned. Include user feedback based on user testing (optional). The PPT with recorded video presentation should give a managerial perspective about your project, walk through the site, and explain the lessons learned.

## **Attendance and Participation**

**Attendance in this class is required.** While there is no specific grade given for attendance, absences and late attendance will negatively affect your in-class experience. It is your responsibility to seek out help from classmates to fill you in on missed materials. Students are expected to be on time to the lectures. Students who arrive late can enter the classroom but will be marked as late or absent.

In addition, every student must abide by the Kuwait University Policy on Attendance (published in the Student Guide). A copy of the student guide can be accessed online on:

[http://vpaa.ku.edu.kw/ar/documents/KU%20ByLaws/Students/Curriculum\\_Regulations.pdf](http://vpaa.ku.edu.kw/ar/documents/KU%20ByLaws/Students/Curriculum_Regulations.pdf)

- Each student should turn silent his/her mobile at the beginning of class
- Every student in this course must abide by the Kuwait University Policies (including ERT additions) on Attendance (published in the Student Guide, Chapter 3, Section 13). A copy of the student guide can be accessed online on: <http://kuweb.ku.edu.kw/ku/Students/References/index.htm>
- [http://kuweb.ku.edu.kw/cs/groups/ku/documents/ku\\_content/kuw055940.pdf](http://kuweb.ku.edu.kw/cs/groups/ku/documents/ku_content/kuw055940.pdf)
- Be on time for the lecture (remember, class starts on time, NOT 5 minutes later). At the beginning of each lecture, I will take attendance. After I take attendance, all students not in the room are considered absent.
- Students must attend the classes they are enrolled in (i.e., no informal switching between sections for the same faculty member or between different faculty members). The same is applied to taking quizzes, midterm, and final exams.

- University regulations governing absenteeism are applied to all students. This involves a first warning after **3 hours (not lectures)**, a second warning after additional 3 hours absence and a failure notice for any absence beyond the six hours. Absence with a valid excuse will still count as an absence. But each student is allowed two absences (no questions asked), after that, each absence will be counted.

## Exams and Quizzes

- Exams and Quizzes (**ONLINE on YOUR LAPTOP- NO handheld devices**)
  - Make-up quizzes and exams: **No make up for quizzes.** Midterm and final exams will be executed according to plans. In case Moodle fails for uncontrolled reasons, the exam will be re-scheduled the next Saturday (after the initial plan date) and at the same timing. **If you have Covid (during Midterm/ Final Exam time), then submit documentation of PCR/ Civil ID your instructor to decide on your case. For the Midterm, if your documentation is approved, you will be invited to complete a makeup (at a time set by your instructor). For the Final, if your documentation is approved, an “I” (Incomplete) will appear in the KU portal and you will be invited to complete the makeup the first week of the following academic term.** You must inform your instructor and share the results of a PCR test at least 4-5 days before and exam to be eligible for a make-up.
  - **Moodle will be used with LockDown browser and Respondus monitoring system (or comparable systems like Safe Exam Browser- SEB). Make sure you access Moodle using Google Chrome.** LockDown Browser/ SEB must be installed on laptop or desktop. Be sure to install LockDown Browser Respondus/ SEB BEFORE the exam date by taking the compatibility test in Moodle (for technical help, please see your TA). **You are responsible for having a working computer (Systems Updates and Lockdown/ Respondus / SEB Updates) Fully Charged and with working Internet BEFORE THE EXAM.**
  - **Exams will NOT be administered using handheld devices like iPhone or iPad (even if it has worked in past exams).** You need a desktop or laptop with a Camera and Microphone for the ENTIRE EXAM.
  - Quizzes/ Exams/ Deliverables will start on time. Students not arriving on time will NOT be allowed to take the assessment.
  - Any suspicious behavior during the exam will be considered cheating. The student will receive a ZERO for the assessment.
- Every student in this course must abide by the Kuwait University Policy on Cheating and Plagiarism (published in the Student Guide, Chapter 3, Section 2; p. 22). A copy of the student guide can be accessed online on: [http://kuweb.ku.edu.kw/cs/groups/ku/documents/ku\\_content/kuw055940.pdf](http://kuweb.ku.edu.kw/cs/groups/ku/documents/ku_content/kuw055940.pdf)
  - If you have **special needs** (e.g., any type of disability, pregnancy, diabetes, etc.), please make sure you inform the instructor (**within the FIRST WEEK of class**). You can also check with Associate Dean for Student Affairs office for other rights and duties.
  - **The instructor will NOT answer any questions during the exam including clarification questions. Furthermore, dictionary use is prohibited during exams.**

- Grading:

It is important to recognize that a grade reflects another person’s evaluation and judgment of your work. I will personally grade your homework, group presentation, quizzes, and final exam. You are encouraged to meet with me at any time to discuss the strengths and

weaknesses of your course work (i.e., to gain understanding of your performance). I will do my best to ensure that grading is fair and consistent for all students. Your suggestions, questions, and grade challenges are welcomed and encouraged. However, no part of your grade will be based on anything other than your coursework and attendance.

- There are **NO** collaborations in quizzes and exams - this will be considered **cheating**. Plagiarism will also be considered as cheating. The student will receive a ZERO for the assessment and/ or an “F” grade in the course (see Academic Dishonesty below).
- Late submission of assessments will NOT BE ACCEPTED (NO EXTENSIONS) even with a valid excuse. A deduction will be applied [-25% per day] if a your instructor chooses to accept late submission.
- Writing Style: Students must refer to APA writing style for their assignments and report writing. Refer to the English Language Center for help (For more details see <http://www.easybib.com/guides/citation-guides/apa-format>).
- **After a grade is posted (quizzes, assignment, case study, midterm, ... etc), you will have two days to discuss it with your instructor or teaching assistant (TA). After that, the grade is FINAL and released.**
- Negotiation of the final grade is neither accepted nor discussed.  
**Important note:** Please DON'T send anyone (a family member or any other person) to talk to me about raising your grade. Any student who violates this rule will not receive class bonuses (if any).
- There will be **NO ROUNDING UP OR DOWN** once your grade is finalized (for example, 89.99% is B+ not A-).

## Academic Integrity

The University's code of academic integrity is designed to ensure that the principles of academic honesty and integrity are upheld. All students are expected to adhere to this code. All acts of academic dishonesty will be dealt with in accordance with the provisions of this code. Every student in this course must abide by the Kuwait University policy on cheating and plagiarism. A copy of the student guide can be accessed online on:

[http://vpaa.ku.edu.kw/ar/documents/KU%20ByLaws/Students/Curriculum\\_Regulations.pdf](http://vpaa.ku.edu.kw/ar/documents/KU%20ByLaws/Students/Curriculum_Regulations.pdf)

In particular,

- You should neither give nor receive assistance from anyone in taking the quizzes, homework, and other exams.
- You should immediately report to me any act of academic dishonesty that you may observe. Your anonymity will be protected.

Cheating includes (but not limited to):

- Using unauthorized notes during the examination.
- Using unauthorized devices during the examination.
- Communicating with anyone besides instructor or exam proctor.
- Looking at another student's work during the examination.
- Copying another student's work.
- Use of AI Tools to generate content, or Translation tools.



Academic Dishonesty will not be tolerated. Cheating/ submitting work prepared by someone else or AI / resubmitting work from other courses/ plagiarism or AI generation and the like will EARN the student an “F” grade in the course.

## Other Course Policies

Your fellow students and I need 100% of your attention and mindshare while the class is in session. Toward this end:

- For each class meeting, please arrive sufficiently ahead of the official start time in order to collect any handouts or prior quizzes and get yourself ready.
- Please do not walk around or out of the classroom, while class is in session.
- All electronic gadgets must be turned off or set silent while class is in session (vibrate mode is not accepted). Smart devices must be removed.
- Students are responsible to have working and up to date computer/ laptop and internet. Students are responsible for making sure their work is posted to the LMS: make sure the posting to the forum is uploaded fully, make sure files uploaded are not corrupt (download then upload the work and make sure it is readable) etc.
- Students are responsible for the content/ instructions etc. on LMS as well as emails. For example, your instructor will not remind you of due dates.
- Students are responsible for content of any social media groups setup. These are NOT monitored by your instructor.
- Recording (audio/ video) as well as still photography are strictly prohibited (in accordance with KU policies).
- The use of AI tools to answer questions or generate content etc. is prohibited for this course. If you use translation tools, they must be cited properly.
- Students should contact instructor by email (NOT MS Teams) within working hours and days. Using the subject format ISOM 452-Sec 01A: Topic. With greeting, request, and closing with full name and KU ID. Students cannot contact instructors or TAs out of normal hours (e.g., 2am on Friday) to get help if they have a question or technical issue and will not get an extension for deadlines to solve technical problems.
- Course policies may change depending on emergent situations and student behaviors.

## Common Excuses that are not Acceptable

“I am a senior and I need an A in the class to graduate because my GPA is low.”

“My scores do not reflect the enormous effort I am putting into this course.”

“I spent hours studying for this test, but I just blanked out during the test.”

## APPENDIX: CBA'S VISION, MISSION & COMPETENCY GOALS

**CBA Vision:** To be the leading provider of quality business education in the region.

**CBA Mission:** As part of Kuwait University, the leading national institution of higher education, the College of Business Administration is committed to providing quality business education, engaging in research and community services to contribute to the socio-economic development of the country.

### CBA Competency Goals

1. **Analytical Competency:** A CBA graduate will be able to use analytical skills to solve business problems and make a well-supported business decision.

#### Student Learning Objectives:

- 1.1. Use appropriate analytical techniques to solve a given business problem.
- 1.2. Critically evaluate multiple solutions to a business problem.
- 1.3. Make well-supported business decisions.

2. **Communication Competency:** A CBA graduate will be able to communicate effectively in a wide variety of business settings.

#### Student Learning Objectives:

- 2.1. Deliver clear, concise, and audience-centered presentations.
- 2.2. Write clear, concise, and audience-centered business documents.

3. **Information Technology Competency:** A CBA graduate will be able to utilize Information Technology for the completion of business tasks.

#### Student Learning Objectives:

- 3.1. Use data-processing tools to analyze or solve business problems.

4. **Ethical Competency:** A CBA graduate will be able to recognize ethical issues present in business environment, analyze the tradeoffs between different ethical perspectives, and make a well-supported ethical decision.

#### Student Learning Objectives:

- 4.1. Identify the ethical dimensions of a business decision.
- 4.2. Recognize and analyze the tradeoffs created by application of competing ethical perspectives.
- 4.3. Formulate and defend a well-supported recommendation for the resolution of an ethical issue.

5. **General Business Knowledge:** A CBA graduate will be able to demonstrate a basic understanding of the main business disciplines' concepts and theories.

#### Student Learning Objectives:

- 5.1. Acquire a fundamental understanding of knowledge from the main business disciplines (e.g. finance, accounting, marketing, and management information systems, among others).