

UNIVERSITY OF REGINA
Department of Computer Science

CS 215 – Web & Database Programming
Spring 2021

Instructor: **Dr. Orland Hoerber (orland.hoerber@uregina.ca)**
Webpage: **<http://www.cs.uregina.ca/~hoeber/teaching/cs215/>**

Format: **Blended (Asynchronous Content Delivery + Synchronous Sessions)**
Lectures: **W/F 12:30 – 1:45 PM (programming & problem-solving, via Zoom)**

Office Hours: **M/W/F 2:00 – 3:00 PM (via Zoom)**

Labs: **Lab Section 085: T/R 10:30 AM – 12:20 PM (Zoom) or**
Lab Section 086: T/R 12:30 PM – 2:20 PM (Zoom) or
Lab Section 087: T/R 2:30 PM – 4:20 PM (Zoom) or
Lab Section 088: T/R 4:30 PM – 6:20 PM (Zoom) or
Lab Section 089: T/R 6:30 PM – 8:20 PM (Zoom)

Course Prerequisites

CS 210 (Data Structures and Abstractions)

Course Objectives

This course shows how interactive database-driven web applications are designed and implemented. Appropriate protocols and languages for web and database programming will be discussed, with a focus on client-server architectures, interface design, graphics and visualization, event-driven programming, information management, data modelling, and database systems.

Textbook

Nixon, R. Learning PHP, MySQL, & JavaScript, *5th Edition*, O'Reilly Media, 2018 (ISBN-13: 978-1-491-97891-7)

Evaluation

The final grade in the course will be determined as follows:

Assignments	6 x 5%	30%
Lab Assignments:	avg. of 11 labs	8%
Online Quizzes	6 x 2%	12%
Attendance and Participation	every class	5%
Online Midterm Exam	Wed May 26	15%
Online Final Exam	Mon June 21	30%
Total		100%

*** In order to pass the course, you must pass the final exam (failure to pass the final exam may result in your final exam grade being assigned as your final course grade).**

*** Your final mark may be adjusted by +/- 5%, at the instructor's discretion.**

Course Schedule & Topics (Tentative)

Topic #	Date	Topics
0	May 3 – 5	CS 215 Introduction & Review Syllabus
1	May 3 – 5	Readings: Ch 1 The Internet & the Web
2	May 5 – 7	Interface Design & Sketching
3	May 10 – 12	Readings: Ch 18, 19, 23 HTML5 & CSS3 Assignment 1 (Mon May 10)
4	May 12 – 14	Readings: Ch 13 – 16 JavaScript Fundamentals
5	May 17 – 19	JavaScript, DOM, & Events Assignment 2 (Mon May 17)
6	May 19 – 21	JavaScript & DOM Manipulation
7	May 24 – 26	May 24 is a holiday, so the asynchronous content will still be released two days early Database Fundamentals Assignment 3 (Wed May 26) Online Midterm Exam (Wed May 26)
8	May 26 – 28	Readings: Ch 8, 9 Databases & SQL
9	May 31 – June 2	Readings: Ch 10 MySQL & PHP Assignment 4 (Mon May 31)
	June 2 – 4	Continue with MySQL & PHP
10	June 7 – 9	Readings: Ch 17 AJAX & JSON Assignment 5 (Wed June 9)
	June 9 – 11	Continue with AJAX & JSON
11	June 14 – 16	Security Assignment 6 (Wed June 15)

The **Final Exam** has been scheduled for Monday June 21, 2021 from 2:00 PM – 4:00 PM. Note that UR Self-Service specifies a three-hour time slot for the final exam, but the exam will be a two-hour exam. The exam will be comprehensive, with extra weight given to the topics covered after the midterm exam.

Lectures and Online Material

This course will be offered in a blended online format (Asynchronous Content Delivery + Synchronous Sessions), offered in a compressed 6.5 week format. What this means is that a normal week's worth of material will be covered in half a week.

Every Monday and Wednesday at 6:00 AM, online course material will be delivered asynchronously via UR Courses for the half-week's topic.

Labs will be run every Tuesday and Thursday at various times throughout the day. The lab topic will be aligned with the asynchronous course material that was released the day before. Make sure you review that content before the lab.

Twice per week (Wednesday and Friday 12:30 – 1:45 PM, via Zoom), the course instructor will hold synchronous programming and problem-solving sessions that work through a running example that is aligned with the programming assignments. Students are expected to attend these sessions and participate in the activities lead by the instructor. Attendance will be taken and participation logged, which will form part of the final grade for the course.

Office Hours

The course instructor will hold office hours three times per week (Monday, Wednesday, and Friday 2:00 – 3:00 PM, via Zoom). In order to make effective use of this time, it is recommended that you review the course material early in the half-week, and get started on any assignments as soon as you are able. Doing so will allow you to identify areas where something does not make sense or where you need further explanations.

Quizzes and Exams

There will be *six online quizzes* distributed throughout the semester. These will be posted as part of the course material, and will be available for 12 hours (noon to one minute before midnight on either a Wednesday or a Friday). They are meant to be self-assessment tools, so that you know where you stand in terms of knowledge for the midterm and final exams. The quizzes will have a time limit (1 minute per question) so that they can measure your knowledge and understanding of the topic, rather than what you can find in the course material or using other online resources. The topics of the quizzes will cover everything since the previous quiz (since the start of the course material, for the first quiz). You should take care to study this material, before starting each quiz.

There will be one *online midterm* exam (Wednesday May 26, 2021), which will be held during the normal synchronous programming & problem-solving session (12:30 – 1:45 PM). The time limit for this exam will be 75 minutes, and it will cover all course material to date. The exam will include both conceptual questions (short answer) and programming questions (writing software code). Note that there is an assignment due

on this same day, but there are significant overlaps in the topics allowing your studying to support your assignment work, and vice versa. You are required to do the quizzes and midterm exam alone, and not share the questions or answers with other students. All cases of academic misconduct will be reported and penalized. In your studying, you may prepare a single page (one sided, 8.5x11) help-sheet, which you may consult during the exam.

The *final exam* will test your comprehensive knowledge of both the concepts and your ability to program web & database applications. The two-hour online exam will be held on Monday June 21, 2021 from 2:00 PM – 4:00 PM. As with the midterm, you may prepare a single page (one sided, 8.5x11) help-sheet, which you may bring to and consult during the final exam.

Taking your Final Exam with Proctortrack

Proctortrack is a remote proctoring tool that is integrated into UR Courses and provides for student identify verification and the monitoring of students while taking examinations remotely. This remote proctoring option allows University of Regina students to continue with remote learning in the current environment. When using Proctortrack remote proctoring service, your personal information is being collected and will be used for the purposes of creating a student profile account, verifying your identity, and proctoring your exam.

When you sign into Proctortrack, you will be asked to provide your consent, agreement and acknowledgment to allow Proctortrack to collect, create, process and store personal information. This personal information may include: U of R student card, live image captured via a webcam, first and last name, institution name, student number, and real-time audio, video and on-screen activity to prevent unauthorized viewing of content during an exam.

The personal information collected by Proctortrack will be used by the University of Regina for the purposes of identity verification and exam proctoring. Any video records of you created by Proctortrack will be kept by Proctortrack and shared as necessary with the University of Regina for assessment of possible academic integrity infractions. Non-relevant recordings are destroyed after 180 days. All personal information collected and stored by Proctortrack within your student profile account will be permanently deleted if the account has not been used after one year.

For more information, please reference the remote proctoring FAQ document at <https://www.uregina.ca/remote-learning/index.html#proctoring>.

Assignments

All assignments are due at 11:55 PM of the specified dates, and must be submitted electronically via UR Courses. Late submissions (up to 12 hours) will be accepted, but with an automatic 20% penalty for anything that is more than one hour late. Grades for missing assignments may be moved to the final exam under exceptional circumstances, and with appropriate documentation.

Note that in the compressed 6.5 week Spring Semester, the assignments will be due in quick succession. After the first week, the six assignments are due once per week on

Mondays or Wednesdays (May 10, 17, 26, 31; June 9, 16). Be sure to start each assignment as soon as you can, so that you have time to complete it. The compressed format of the course means that you will need to spend double the time you would in a normal semester.

Labs and Lab Assignments

In the compressed format of this course, labs will be held twice per week: Tuesdays and Thursdays. The labs on Tuesdays will cover course content released on Mondays; the labs on Thursdays will cover course content released on Wednesdays. **The labs will start on the first week of classes (May 4, 2021).**

Students are expected to attend the labs in the lab session in which they are registered only. Attending a lab session for which you are not registered is not permitted due to space and resource limitations.

Lab attendance will be logged during each lab session; 1/5 of your lab mark is based on your attendance and active participation in the activities of the lab.

Lab assignments are due 6 hours after the conclusion of your specific lab session. If you cannot complete the lab assignment during the lab session itself, you should continue to work on it immediately after the session is over, and submit it as soon as you can. Late submissions will not be accepted, but the grades for missing lab assignments may be moved to the final exam under exceptional circumstances, and with appropriate documentation.

Note that some of the lab material will show alternate ways of doing some of the web and database programming than what is shown in the course material. This is done to illustrate the variety of ways in which this programming can be done. For the assignments, things must be done in the ways that are shown in the course material.

Grades

All grades will be assigned according to the Undergraduate Calendar – Academic Regulations – Grading System and Descriptions:

- 90–100: An outstanding performance.
- 80–89: Very good performance.
- 70–79: Above average performance.
- 60–69: A generally satisfactory and intellectually adequate performance.
- 50–59: A barely acceptable performance.
- 0–49: An unacceptable performance.

Any issues or problems with the assigned grades must be identified and sent to the course instructor within one week of receiving the marked feedback. This must be done via email (orland.hoeber@uregina.ca) and must include a clear explanation of where it is believed a mistake has been made. Simply asking for additional grades is not sufficient ground for a re-assessment.

Other Notes and Information

1. The best way to contact the course instructor is via the “Ask Your Instructor” forum on UR Courses. You should not send direct messages or “email” via UR Courses as these are difficult to monitor and keep track of conversations.
2. You should send class-related email using your University of Regina account only. This will ensure that spam filtering does not keep your email from getting to me.
3. You should check UR Courses and your University email on a regular basis. Important announcements for this class will be made on UR Courses. Other announcements and direct communication will be via email.
4. **Students are expected to keep up with the asynchronous course material, attend the labs, and attend the synchronous programming & problem-solving sessions.**
5. If any student who, because of special needs, may have a need for accommodations, please contact the Center for Student Accessibility (<http://www.uregina.ca/student/accessibility/>).
6. Although group discussions and study groups are encouraged, **all lab work, assignments, and quizzes are to be completed individually.** Such discussions should be focused on general concepts, ideas, and lecture materials, and not the specific solutions of any assignment or lab. More specifically, this communication should be limited to verbal discussion of concepts, and must never include the sharing of program code or written documentation. For example, if you are given an assignment on form validation, you may legitimately discuss how form data is submitted and the how regular expressions are supported in JavaScript, but you must not share any code from the solution. Any close resemblances in the submitted code will be assumed to be the result of cheating. **Copying of assignments is plagiarism. Allowing your assignments to be copied will be treated the same as copying.** You are NOT allowed to work in groups on the labs or assignments. THE CONSEQUENCE OF PLAGIARISM OR ANY OTHER FORM OF CHEATING MAY RANGE FROM A ZERO GRADE, TO FAILURE IN THE CLASS, TO EXPULSION FROM THE UNIVERSITY. Please note that the Associate Dean of the Faculty of Science will be informed of any such incident, as per university regulations. Refer to the section on Academic Misconduct and Penalties in the General University Calendar.
7. All exams allow a single page (single sided, 8.5.x11) help sheet. Mobile phones, watches, and all other electronic devices are not allowed to be on your person during the exams. In addition, mobile phones, tablets, and all other wireless devices except for the computer you are using to write the exam must be turned off. Any student violating these rules may be charged with academic misconduct.
8. **If you have any issues with the marking of any assignment or exam in this course, please submit your complaint via email directly to the instructor** (not to the marker or TA). Explain which course component you want investigated, your current mark, and the perceived problem with the marking. **All issues with marking must be raised one week after the grade is assigned.**
9. The Undergraduate Calendar is available here: <https://www.uregina.ca/student/registrar/resources-for-students/academic-calendars-and-schedule/undergraduate-calendar/sections.html>