CS 4990: Ruby on Rails Web Application Development

Spring 2015 Syllabus

Course Description

Students will complete web application projects using modern web technologies including Ruby and Ruby on Rails.

Prerequisites

Completion of CS 1410 (grade C- or higher) is strongly recommended.

Course fees

Course fee: $25, used to assist in maintaining CIT infrastructure.

Disability Statement

If you suspect or are aware that you have a disability that may affect your success in the course you are strongly encouraged to contact the Disability Resource Center (DRC) located in the North Plaza Building. The disability will be evaluated and eligible students will receive assistance in obtaining reasonable accommodations. Phone # 435-652-7516.

Sections

One section:

1. MWF at 4:00pm - 4:50pm in Udvar-Hazy 120
   CRN: 26817 (CS 4990)
   CRN: 27511 (IT 4990)
   CRN: 27514 (WEB 4990)
   Final exam: Friday, May 1 at 2:30pm - 4:30pm

Instructor

Instructor: DJ Holt
Email: djholt@dixie.edu

Lab Hours: Mondays and Wednesdays from 2:00pm to 2:50pm, or by appointment.

Objectives

At the end of the course, students will:

- Understand how to use Ruby and Ruby on Rails to develop modern web applications.
- Understand how to implement application features including RESTful resource persistence, user authentication, user authorization, and more.
- Understand the software architectural and design patterns necessary to develop functional, maintainable, and scalable web applications.

Resources

Computer Labs

You may use the computers and software in the Smith Computer Center. Some lab assistants may be able to help with assignments and pass off homework assignments for introductory courses.
Students are encouraged to use either a Mac or Linux operating system to complete the projects assigned in this course. The Mac and Linux operating systems provided within the CIT lab facilities have all necessary software installed and configured as required for the course. Students may use personal computers to complete course assignments, however, this will require several software components to be correctly installed and configured. While this will not be covered in class, students may request individual help from the instructor.

**Course Web Site**

Assignment submissions and grades will be managed in the Canvas System.

**Assignments and Exams**

**Reading**

This course has no required text, however, students will be expected to find and reference online documentation and examples to assist with the completion of assignments. Additional reading resources can be recommended upon request.

**Assignments**

A series of approximately 15 programming projects will be assigned. An assignment will be due almost every week. Assignments are due at 11:59pm on the date specified in the schedule.

**Exams**

A comprehensive final exam will be given at the end of the semester.

**Grading**

Assignments will count for 75% of your point total. The final exam will count for 25% of your point total.

Letter grades are assigned based on the percentage of possible points attained, according to the following chart:

<table>
<thead>
<tr>
<th>Minimum Percentage</th>
<th>Letter Grade</th>
<th>Minimum Percentage</th>
<th>Letter Grade</th>
<th>Minimum Percentage</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>94</td>
<td>A</td>
<td>84</td>
<td>B</td>
<td>74</td>
<td>C</td>
</tr>
<tr>
<td>90</td>
<td>A-</td>
<td>80</td>
<td>B-</td>
<td>70</td>
<td>C-</td>
</tr>
<tr>
<td>87</td>
<td>B+</td>
<td>77</td>
<td>C+</td>
<td>67</td>
<td>D+</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60</td>
<td>D-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>F</td>
</tr>
</tbody>
</table>

**Course Policies**

**Attendance**

Students are responsible for material covered and announcements made in class. School-related absences may be made up only if prior arrangements are made. The class schedule presented is approximate. The instructor reserves the right to modify the schedule according to class needs. Changes will be announced in class and posted to the website. Exams and quizzes cannot be made up unless arrangements are made prior to the scheduled time.

**Time Commitment**

Courses should require about 45 hours of work per credit hour of class. This class will require about 135 hours of work on the part of the student to achieve a passing grade, which is approximately 9 hours per week. If you do not have the time to spend on this course, you should probably rethink your schedule.

**Collaboration**

Limited collaboration with other students in the course is permitted. Students may seek help learning concepts and developing programming skills from whatever sources they have available, and are encouraged to do so. Collaboration on assignments, however, must be confined to course instructors, lab assistants, and
other students in the course. Students are free to discuss strategies for solving programming assignments with each other, but this must not extend to the level of programming code. Each student must code his/her own solution to each assignment. See the section on cheating.

Cheating

Cheating will not be tolerated, and will result in a failing grade for the students involved as well as possible disciplinary action from the college. Cheating includes, but is not limited to, turning in homework assignments that are not the student’s own work. It is okay to seek help from others and from reference materials, but only if you learn the material. As a general rule, if you cannot delete your assignment, start over, and re-create it successfully without further help, then your homework is not considered your own work.

You are encouraged to work in groups while studying for tests, discussing class lectures, discussing algorithms for homework solutions, and helping each other identify errors in your homework solutions. If you are unsure if collaboration is appropriate, contact the instructor. Also, note exactly what you did. If your actions are determined to be inappropriate, the response will be much more favorable if you are honest and complete in your disclosure.

Where collaboration is permitted, each student must still create and type in his/her own solution. Any kind of copying and pasting is not okay. If you need help understanding concepts, get it from the instructor or fellow classmates, but never copy another’s code or written work, either electronically or visually. The line between collaborating and cheating is generally one of language: talking about solutions in English or other natural languages is usually okay, while discussions that take place in programming languages are usually not okay. It is a good idea to wait at least 30 minutes after any discussion to start your independent write-up. This will help you commit what you have learned to long-term memory as well as help to avoid crossing the line to cheating.

College Policies

Additional college policies, calendars, and statements are available online at http://new.dixie.edu/reg/syllabus/.