IT4200 - Advanced Web Delivery

Fall 2015 Syllabus

Course for students in Computer and Information Technologies programs. This course will instruct students in advanced web server configuration, management, and optimization necessary to provide web application delivery environments. RAID will be covered. Cloud management and virtualization will be introduced. Proxy serving, load-balancing, and replication will also be demonstrated.

Prerequisites: IT3100 should have been completed with a C- or better.

Course fee: The fee for this course is $25.00, used to assist in maintaining the CIT infrastructure.

Course Time: M,W,F 2:00-2:50 in Hazy 119

Final Exam: Wed Dec 16, 1:30-3:30pm

Professor: Dr Joe Francom
  - Email: francom at dixie dot edu
  - Phone: 435-652-7732 (note: email preferred)
  - Office: NBURNS 237
  - Office Hours: MWF 11-noon, 1-2pm, and TR 9-10:30am

Objectives

At the end of the course, students will be able to:
- Describe and implement the various levels of RAID.
- Describe how HTTP works and define the various status codes.
- Install and configure the apache web server.
- Create name-based and ip-based hosts and the directives that pertain to virtual hosts.
- Utilize different apache modules correctly.
- Configure different load-balancing strategies.
- Perform and explain replication.
- Create and sign certificates, and run an SSL enabled server.

Resources

Texts

There is no required text for this course.

There are several links and other readings given throughout the course.

Computer Resources

You may use the computers in Udvar-Hazy 151 and Udvar-Hazy 200. There will also be lab assistants in these labs. You will also have access to virtual machines to complete most of the tasks.

Course Website

This course has an accompanying website. You are responsible for announcements, the schedule, and other resources posted on the website. Assignments and grades will be managed using Canvas, which requires a valid Dixie username and password. The course website is accessible at http://cit.cs.dixie.edu/courses/.

Assignments and Exams

Reading

The student is responsible for reading the material in the textbook. A reading schedule is provided with the class schedule on the course website. The student is expected to read the material before the class in which it is discussed. The book also includes material beyond what we will discuss in lecture, which you are encouraged to
study on your own. Feel free to bring questions from the reading to lectures or to office hours.

Assignments

Assignments will be graded for accuracy of function and style of design. Programs that do not compile will receive no credit. It is important that you start early and get each of your assignments done before its due date. Many problems will take much longer to solve in a single sitting than in many shorter sessions. Give yourself time to think; sleep on difficult problems. Finish early so you can go back and refine your initial approach.

Assignments are due on the date listed in the schedule, and must be passed off to the instructor or a lab assistant for the course. Your instructor will tell you how to appropriately submit assignments. This means that you must reserve time to pass it off at a suitable time before the end of the day it is due.

Exams

There will be several exams given throughout the semester. Any missed tests will need to have the Divisional Dean’s approval before you can take the test.

Grading

Projects and exams each contribute to your point total.

The breakdown for the above items is as follows:

- Projects = 50%
- Tests = 50%

Here is the grading scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
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<tbody>
<tr>
<td>A</td>
<td>&gt;= 94</td>
</tr>
<tr>
<td>A-</td>
<td>&gt;= 90</td>
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<tr>
<td>B+</td>
<td>&gt;= 87</td>
</tr>
<tr>
<td>B</td>
<td>&gt;= 84</td>
</tr>
<tr>
<td>B-</td>
<td>&gt;= 80</td>
</tr>
<tr>
<td>C+</td>
<td>&gt;= 77</td>
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<tr>
<td>C</td>
<td>&gt;= 74</td>
</tr>
<tr>
<td>C-</td>
<td>&gt;= 70</td>
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<tr>
<td>D+</td>
<td>&gt;= 67</td>
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<tr>
<td>D</td>
<td>&gt;= 64</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 64</td>
</tr>
</tbody>
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Course Policies

Absences

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

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.

Late work

Late work is not accepted. You are expected to turn things in by the date they are due. If something is due at 11:59pm and you are 1 minute late, you will not receive credit. Your lowest assignment score will be dropped.

Any Exceptions must be discussed with the instructor. Computer failure does not qualify as an excuse for late
work.

It is your responsibility to see that assignments/projects are turned in and on time. If you come to me and say, “I turned in that assignment”, yet I have no record of it, you will receive a 0. The burden of proof is on you to prove that you turned in something at a given time. We are using an electronic submission system which records when an item is submitted.

Finally, no points can be contested after a test which covers that assigned material has been given. So for example, if you come to me at the end of the semester and say “Oh, but I turned in that assignment the second week of the semester”. If I don’t have a record of it, and we have already tested on it, you will not get the points.

**Cheating and 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 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**

DSU seeks to provide an environment that is free of bias, discrimination, and harassment. If you have been the victim of sexual harassment/misconduct/assault we encourage you to report this to the college’s Title IX Director, Cindy Cole, (435) 652-7731, cindy.cole@dixie.edu. If you report to a faculty member, she or he must notify the Title IX Director about the basic facts of the incident.

You are required to frequently check your Dmail account. Important class and university information will be sent to your Dmail account, including DSU bills, financial aid/scholarship notices, notices of cancelled classes, reminders of important dates and deadlines, and other information critical to your success at DSU and in your courses. To access your Dmail account, visit go.dixie.edu/dmail. Your Dmail username is your DixieID (e.g. D00111111) If you have forgotten your PIN, visit go.dixie.edu/mydixie and click the Forgot Pin button.

**Important Links**

- Disability Resource Center - dixie.edu/drcenter
- IT Help Desk - dixie.edu/helpdesk
- Library - library.dixie.edu
- Testing Center - dixie.edu/testing
- Tutoring Center - dixie.edu/tutoring
- Writing Center - dixiewritingcenter.com

Click on this link - [http://www.dixie.edu/reg/syllabus/](http://www.dixie.edu/reg/syllabus/) - for comprehensive information on the Semester Dates, the Final Exam Schedule, University resources such as the library, Disability Resource Center, IT Student Help Desk,
Online Writing Lab, Testing Center, Tutoring Center, Wellness Center and Writing Center. In addition, please review DSU policies and statements with regards to Academic Integrity, Disruptive Behavior and Absences related to university functions.

If you are a student with a medical, psychological, or learning disability or think you might have a disability and would like accommodations, contact the Disability Resource Center (652-7516) in the North Plaza. The Disability Resource Center (http://dixie.edu/drcenter/) will determine eligibility of the student requesting special services and determine the appropriate accommodations related to their disability.