LIS 451: Introduction to Networked Information Systems

Course Syllabus, Fall 2008

Course Overview

This course is a hands-on introduction to technology systems for use in information environments. The course will cover four main topics:

- hardware;
- operating systems;
- networking;
- issues in implementation and managing.

For each topic, we will review the terminology, discuss the advantages/disadvantages of different options, and gain hands-on experience with the technology. The course will include both lecture and lab time. The course also includes a service learning component that provides students the opportunity to put into practice lessons learned throughout the semester while helping within an underserved population. At the end of the semester, students will be better prepared to both perform day-to-day hands-on administration of a networked information system and to manage those who are performing such day-to-day administration.

While students are expected to have basic computer competencies per the GSLIS admissions requirements, the goal of the course to provide practical detailed knowledge of the technology for all levels of competency.

Course Objectives

The overall objective of the course is to both provide a clear conceptual understanding of the computer hardware, operating systems, and networks that make up networked information systems and also to prepare students to take a lead as information technology managers. To this end, the course is structured to provide students with:

1. skills that will not only serve today's needs but setup an understanding for tomorrow's technologies;
2. insights into the strengths and weaknesses of computers and networks as tools used to meet the needs of "the community" in which they find themselves;
3. skills that allow them to effectively assess and manage the "total cost of ownership" by looking at the planning, implementation, and maintenance phases of different network information systems models;
4. a basic working knowledge of computer hardware, operating systems, and networks through hands-on training.

It is important to note that while this course contains a considerable amount of practical, hands-on learning, it is not a "trade" course on the topic. An underlying assumption on the part of the instructor is that while technology is constantly changing, the underlying concepts of it's implementation and use are fairly constant. By learning the underlying concepts, students will be better prepared to help design networked systems that not only work well today, but also develop systems that can be easily adapted for the needs and technologies of tomorrow. The primary objective is to provide a conceptual understanding of the topics of the day through concrete hands-on examples of implementation.
Daily Course Structure:

During both the lecture and lab periods, there will be a continual flow between more formal presentations and semi-structured active-learning activities. Weeks are divided into specific topics that will be highlighted. However, the skills and concepts learned are cumulative overall, with each week's lessons leading into the lessons for the next week.

As mentioned above, the goal of the course is to develop a conceptual knowledge of the various topics. To this end, step-by-step instructions are not typically provided during lab exercises. Instead, the instructor will step students through the exercises while pointing out various conceptual issues when appropriate.

At the end of each week's lab period, time will be set aside to review the lessons for the day. These will provide students with a starting point for answering that week's reflective questions. The goal of the reflective questions is two-fold:

1. Provide quick feedback to the instructor regarding progress in the course and to spot places where certain concepts need to be better emphasized; and
2. Provide a means to direct students in consideration of key concepts and take home lessons after a busy day of learning.

Readings:

Readings are divided into those that are considered required for the student to achieve the core objectives of the course, and additional readings that students may find valuable to gain further information in areas of special interest to them. Readings may include both chapters from the primary texts listed below, and also from various online sources. Students are encouraged to complete the required readings by the end of the week for which they are assigned. While students are not expected to complete the readings prior to class for a given week, some students find it helpful to browse the readings in advance, and then read them in more depth following the class.

Primary texts for the course are:

Hardware:

Networking:

Course Fee:

A $25 fee is part of the course to recover the costs for lab equipment and the travel that is part of the course. This fee is charged directly to the student as part of the overall tuition and fee schedule.

Evaluation:

Students will be graded on a 90% (A), 80% (B), 70% (C), 60% (D) scale. Graded assignments and the total percent of the grade for each are listed below:

*Reflection Papers (50% of total grade)*:

There will be individual reflection papers due during the course of the semester. The reflection papers will include several guided questions that will review the topics of the day. Time will be set aside at the end of each lab period to review the questions. As such, the reflective questions should not be answered until after the end of the lab period. Unless otherwise noted, the reflective paper will be due 8 AM the following Wednesday and will likely take about 30 minutes to complete. Ten percent of the grade will be deducted for each week the papers are turned in late.

Each paper should be uploaded to the assignment page as a Word file. The commenting
function of Word will be used by the instructor to provide feedback to the students. While lab exercises will typically be performed with a lab partner, reflective papers will be turned in individually and should reflect the individual's understanding of the week's concepts. The instructor reserves the right to modify the exercises during the semester to better meet the interests of the students.

**Final Project Evaluation (45% of total grade):**

Each project team will be required to provide a written report providing a summary of their project work. A wiki space will be provided for each project team with a customized template detailing the information to be provided by the group. Essentially, the final project report will provide a summary of the site, the project, the process of completing the project, the results, and a review of the successes and failures of the project work. In addition, the group and each individual within the group will provide a reflection on the lessons learned during the course of the project work. The project report will be due at the time of the final presentation for the course.

At the end of the semester, there will be a time set aside for a debriefing as a class. Each group should be ready to provide a review of the project to the class to enable the others to benefit from the lessons they learned over the course of working on their final projects. There is no need for a formal presentation, but it is important that each group be able to provide a sufficient description of their projects to allow a context for others to understand the lessons that were learned. In addition, there will be a time for the class to have an open discussion about how the work went, what went well, and what could go better, as well as what was learned by all throughout the process.

**Student Evaluations (5% of total grade):**

Each student should participate actively in both the final project execution and the final debriefing and paper. Students will be given a chance to anonymously rate the involvement of fellow final project group members on a 0-10 scale (10 being the top score assigned to those who provided significant help on all phases of the group work; 0 being the bottom score reserved for those who had no involvement at all in any phase of the group work). **This is not a rating of a students technical ability, but a rating of their overall contribution to the project** Scores from each student will be averaged for the final point value.

**Disclaimer:** The instructor reserves the right to make modifications to any part of the class syllabus or schedule to better accommodate the needs of the students within the course. Students will be given advance notice of relevant changes in class or via email.

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