CS245 Computer Organization -- Bryan Higgs

Fall 2006

Syllabus

Office Hours: M, T, W, 2pm – 5pm
Phone: 897-8288 Email: bhiggs@rivier.edu

Brief Course Description:
This course is an introduction to the building blocks and organization of modern computers. Topics include digital logic and its application to understanding central processing unit organization; computer memory and design of a stored-computer program; other basic modules, such as cache memory, coprocessors, peripheral buses, and input/output techniques; general functions of a modern operating system in a computer environment.

Required Text:

Prerequisite:
CS181: Programming Fundamentals

Course Objectives:
To familiarize each student with the concepts, building blocks and organization of modern computers.

Classroom Policies:
Students are expected to attend and participate in all classes. Attendance is taken at the beginning of each class. Notice to the instructor in advance of any anticipated absence is expected whenever possible. It is the student’s responsibility to make up any material missed as a result of any absence.

Course Requirements and Grading Policies:
Students will be evaluated based on quizzes and assignments, a midterm, and a final examination. All tests/examinations are online and open book.
Quizzes & Assignments: 80%, Midterm: 10%, Final: 10%

Teaching Strategies:
Built around the textbook, the course web site, a Blackboard web site, and other resources, with numerous examples chosen to illustrate the concepts. Questions and discussion are strongly encouraged.

• Online:
  o No face-to-face scheduled time
  o Live online session, scheduled based on the students’ preferences
• Hybrid:
  o Face-to-face class, initially weekly, Wednesdays 6:00pm to 9:00pm, ED-305 Computer Lab
  o Augmented by online session(s) and other web resources, scheduled based on student preferences.

Material Covered:
• Introduction
• Data Representation in Computer Systems
• Boolean Algebra & Digital Logic
• MARIE: An Introduction to a Simple Computer
• A Closer Look at Instruction Set Architectures
• Memory
• Alternative Architectures
• Performance Measurement & Analysis
• Input/Output & Storage Systems
• System Software
• Network Organization & Architecture
**Americans with Disabilities Act (ADA)**

Rivier College wants to provide reasonable accommodations to students with disabilities. To accomplish this goal effectively and to ensure the best use of our resources, the College expects students to provide timely notice of a disability to the Office of Special Services for verification and for evaluation of available options. Any student whose disabilities fall within ADA should inform the instructor within the first two weeks of the term of any special needs or equipment necessary to accomplish the requirements for the course. To obtain current information on this procedure, contact the Office of Special Services at telephone extension 8497.

**Academic Honesty**

Plagiarism and cheating are serious breaches of academic honesty. In general, plagiarism is defined as the presentation of someone else’s work in whatever form: copyrighted material, notes, film, art work, reports, statistics, bibliographies, and the like, as one’s own, and failing to acknowledge the true source. Quoting word-for-word, or almost so, or using the argumentation of another source without acknowledging this dependence also constitutes plagiarism. Cheating is defined as the giving or attempting to give or to receive unauthorized information or assistance during an examination or in completing an assigned project. Submission of a single work for two separate courses without the permission of the instructors involved is also a form of cheating.

If students are unsure whether a specific course of action would constitute plagiarism or cheating, they should consult with their instructor in advance.

Penalties for plagiarism and cheating vary with the degree of the offense and may take the form of the following academic sanctions:

- the grade of F for the work in question;
- the grade of F for the course;
- notification of the department chair and/or Academic Dean of the College of the misconduct of the student;
- recommendations that the student be suspended or dismissed from the College.

**Statement on Attendance**

The classroom is the heart of the educational experience at Rivier College because it provides, uniquely, a formal setting for the important exchanges among faculty and students. Regular and punctual attendance at all classes, essential for maximum academic achievement, is a major responsibility of Rivier College students. Failure to attend and contribute to the classroom environment significantly and demonstrably reduces the quality of the educational experience for everyone in the classroom. As a result, absences almost always impact the quality of performance.

As part of its commitment to a quality educational experience for all members of the Rivier community, the College formally requires specific attendance policies to be developed by its professors and reviewed by the Division Head and Academic Dean. Any attendance policy used by an individual professor as a criterion for evaluation must be specified in the course syllabus and presented to students during the first week of classes. These policies can be found in respective course syllabi, and may include reasonable penalties and sanctions for excessive absences.

In the event of prolonged illness, accident, or similar emergency, it is the responsibility of the student to notify both the professor and the Office of the Academic Dean. Students must remember that it is always their responsibility to make up the work they may have missed during an absence from class. Students are directed to confer with their professors when their absences jeopardize satisfactory progress. Whenever a professor is absent without notification, students are expected to wait fifteen minutes before
leaving and to sign an Attendance List, which a class member delivers to the Office of the Academic Dean.

Instructors are required to record attendance and alert the Registrar when a student fails to attend the equivalent of two weeks of courses (2 absences for a course meeting once a week, 4 absences for a course meeting twice a week, 6 absences for a course meeting three times a week). The student will then be alerted that he/she is in danger of falling under the 'habitual non-attendance policy” (see below).

### Habitual Non-Attendance Policy

Habitual non-attendance is defined as an absence in any course (for any reason whatsoever) equating to three full weeks of missed class sessions (3 absences for a course meeting once a week, 6 absences for a course meeting twice a week, 9 absences for a course meeting three times a week).

It is the responsibility of the student to notify the College of any intention to withdraw from a course or withdraw from the College. The College will attempt to resolve the issue of habitual non-attendance with the student; however, the College reserves the right to withdraw students who are no longer attending classes. Habitual non-attendance in one or more classes may result in administrative withdrawal from the class or classes affected, withdrawal from the College or, in cases with extenuating circumstances, an administrative leave of absence. In such cases a grade of W of NF will be assigned to the classes affected according to the appropriate date published in the academic calendar.

Students who have attended no class sessions of a course or courses from which they are registered by the end of the drop/add period will be dropped from each class not attended. If a student never attended any courses during the drop/add period, the student will be withdrawn from his/her full schedule of courses.

### 24/7 Blackboard Technical Support

All students have the ability to access Blackboard technical support on a 24/7 basis. Students have many different options for obtaining support, including phone, online technical library, or Live Chat with a customer service representative. The support can be accessed by following this link: [http://supportcenteronline.com/ics/support/default.asp?deptID=3250](http://supportcenteronline.com/ics/support/default.asp?deptID=3250)