Operating Systems
CS 314-002 Spring 2017 (CRN: 14945)

Welcome to CS 314!

Instructor: Dr. Hiroshi Fujinoki
Office: EB 2034                      Office Phone: (618) 650-3727
Email: hfujino@siue.edu
URL: www.siue.edu/~hfujino

Office Hours: Monday: 10:00 A.M.-12:00 P.M. and 1:30-3:30 P.M.
             Tuesday: 2:00-4:00 P.M.
             Wednesday: 10:00 A.M.-12:00 P.M. and 1:30-3:30 P.M.
             Thursday: 2:00-4:00 P.M. (the Thursday office hour can be cancelled
             for Fujinoki's committee duties).
             Friday: Only by Appointment: please make an appointment 24 hours
             prior to the time you want to meet the instructor.

Note: The above office hour schedules do not apply to (1) the final exam week and
(2) the week before the final exam week.

Class Meeting Room: EB-3140
Class Meeting Days: Tuesday and Thursday
Class Meeting Time: 11:00 - 12:15 P.M. (same time for T and R)

Note: item with "*" symbol means an important item.

♣ Course Prerequisites:
CS312 (Computer Organization & Architecture)

♣ Grading: Weight: Final Letter Grade:
  Weekly Quizzes: 20% 100-92: A
  Programming projects: 25% 91-82: B
  Midterm Exam: 25% 81-72: C
  Final Exam: 30% 71-62: D
  Below 62: F
Exams:
- Exams will be closed textbook and closed notes.
- Absence without a prior consent from Dr. Fujinoki will result in zero point.
- If you need any special assistance, you must contact to Dr. Fujinoki at least one week before (since a makeup needs to be arranged).
- One letter-size cheat sheet is allowed in the exams.

Programming Projects: there will be one start-up and three programming projects in this course (Project 0, 1, 2, and 3, respectively). Each programming project is an individual project (i.e., not a team project) if the course instructor does not explicitly allow team work. The topics in each programming project is described in separate handouts. The course programming projects use C/C++ on a UNIX-based system. The weight of the three projects is 5, 30, 30, and 35% (for Project 0, 1, 2, and 3, respectively) of your programming project grade.

Note 1: the schedules of the programming projects are subject to change during a semester, depending of various factors, such as the number of the lecture cancellations due to severe weather and the progress of the lectures.

Note 2: if we cancel some lectures due to severe weather, one of the programming projects may be dropped (the weight of the programming projects will be adjusted, if one of the projects is dropped).

Quizzes:
- Quizzes will be closed textbook and closed notes.
- Absence without a prior consent from Dr. Fujinoki will result in zero point.
- There will be 12 quizzes during this course.
- Your lowest quiz will be dropped from grading.
- If we cancel some lectures due to severe weather, some quizzes may be dropped (the weight of the programming projects will be adjusted if some quizzes are dropped).

Reading Assignments:
Textbook: The course materials are presented using PPT slides in this course, but they are the summaries of the chapters/sections in a required text book. Designated chapters in the textbooks are supposed to be read before each lecture. Subjects in the designated textbooks will be covered in the exams even though those subjects are not explicitly mentioned in the lecture.
∗ Attendance Policy:
  - Attendance will be taken at the beginning of lectures (being late more than 5 minutes may be considered absence).
  - No penalty will be given up to two absences in a semester. For each absence beyond the second absence, -2 point penalty (in 100 scale) will be given to your next exam.
  - The above penalty will not apply to your medical emergency (however, you need to provide written proof of medical service to waive the penalty).
  - To waive penalty for missing a lecture for any reason other than medical emergency, you need to have a prior agreement with the instructor (however, you must have a very good reason).
  - Any error regarding your class attendance status should be reported to Dr. Fujinoki within two weeks after your attendance status is posted to the course web site.

∗ Academic Dishonesty:
  Following activities will be considered academic dishonesty and final letter grade of F can be given:
  - Submitting work (such as homework assignments and projects) done by somebody else (this includes any human/electronic sources (such as web sites)).
  - Watching and copying your neighbors' solutions during quizzes and exams.
  - Modifying your solutions after they are graded.
  - Using materials not allowed during quizzes and exams.
  - Based on the policy of the School of Engineering, any academic dishonesty will be reported to the department chair and the dean of the School of Engineering.

∗ Required Textbook:

  Note: The textbook is required for everyone in this course. The instructor will never loan his textbook to any student in this course.

Other Required Skills/Knowledge:

  Proficiency in C/C++ is required.
**Disability Support:**
- Students who believe they may need accommodations in this class are encouraged to contact the office of Disability Support Services as soon as possible. It is the students’ responsibility to alert the instructor to SIUE sanctioned accommodations. If anyone needs assistance from SIUE Disability Support Services, please contact them.

**Other Notices:**

(1) This course expects each of you to work nine (9) hours other than attending lectures (this is also a policy of SIUE).

(2) Important announcements will be made at the beginning of a lecture.

(3) If you are absent from a lecture, it is your responsibility to find the announcements (you are suggested to talk to your classmates to find the announcements). The course instructor may post the information to the course home, but it is not guaranteed.

(4) Each of you is expected to check "Weekly Notices" in the web site of this course (you can reach the course web site from http://www.siue.edu/~hfujino) at least once in a week. Important notices for that week will be posted on Sunday night.
# Tentative Class Schedule (subject to change):

This schedule is tentative and subject to change.

<table>
<thead>
<tr>
<th>Week #</th>
<th>Day</th>
<th>Topics</th>
<th>Reading Assignments</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>January 10 (T): Introduction to operating systems</td>
<td>Chapter 1 (1.1 through 1.7)</td>
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<td>January 12 (R): Operating System Concepts (1)</td>
<td>Chapter 1 (1.1 through 1.7)</td>
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<td>Week 2</td>
<td>January 17 (T): Quiz #1, Processes and process management (1)</td>
<td>Chapter 2 (2.1 through 2.5)</td>
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<td>Programming Project #0 assigned</td>
<td>Handout</td>
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<td>January 19 (R): Processes and process management (2)</td>
<td>Chapter 2 (2.1 through 2.5)</td>
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<td>Week 3</td>
<td>January 24 (T): Quiz #2, Processes and process management (3)</td>
<td>Chapter 2 (2.1 through 2.5)</td>
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<td>Programming Project #0 due</td>
<td>Handout</td>
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<td>January 26 (R): Programming project #1 discussions</td>
<td>Chapter 2 (2.1 through 2.5)</td>
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<td>Programming Project #1 assigned</td>
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<td>Week 4</td>
<td>January 31 (T): Quiz #3, Threads and thread management (1)</td>
<td>Chapter 2 (2.1 through 2.5)</td>
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<td>February 2 (R): Threads and thread management (2)</td>
<td>Chapter 2 (2.1 through 2.5)</td>
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<td>Week 5</td>
<td>February 7 (T): Quiz #4, Threads and thread management (3)</td>
<td>Chapter 2 (2.1 through 2.5)</td>
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<td>February 9 (R): Process Deadlocks (1)</td>
<td>Chapter 3 (3.1 through 3.4)</td>
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<td>Week 6</td>
<td>February 14 (T): Quiz #5, Process Deadlocks (2)</td>
<td>Chapter 3 (3.5 and 3.6)</td>
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<td>Programming Project #1 due</td>
<td>Handout</td>
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<td>February 16 (R): Programming project #2 discussions</td>
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<td>Programming Project #2 assigned</td>
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<td>Week 7</td>
<td>February 21 (T): Quiz #6, Deadlocks (3)</td>
<td>Chapter 3 (3.5 and 3.6)</td>
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<td>February 23 (R): Memory Management (1)</td>
<td>Chapter 4 (4.1 and 4.2)</td>
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<td>Week 8</td>
<td>February 28 (T): Quiz #7, Memory Management (2)</td>
<td>Chapter 4 (4.3 and 4.4)</td>
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<td>March 2 (R): Midterm Exam</td>
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<td>Week 9</td>
<td>March 7 (T): Spring Break</td>
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<td>March 9 (R): Spring Break</td>
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<td>Week 10</td>
<td>March 14 (T): Memory Management (3)</td>
<td>Chapter 4 (4.5 through 4.7)</td>
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<td>March 16 (R): Memory Management (4)</td>
<td>Chapter 4 (4.5 through 4.7)</td>
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<td>Week 11</td>
<td>March 21 (T): Quiz #8, File System (1)</td>
<td>Chapter 6 (6.1)</td>
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<td></td>
<td>March 23 (R): File System (2)</td>
<td>Chapter 6 (6.2)</td>
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<td>Programming Project #2 due</td>
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Week 12: March 28 (T): Quiz #9, Programming project #3 discussions

Handout

Programming Project #3 assigned

March 30 (R): File System (3)

Chapter 6 (6.3)

Week 13: April 4 (T): Quiz #10, File System (4)

Chapter 6 (6.4)

April 6 (R): I/O Subsystems (1)

Chapter 5 (5.4 through 5.6)

Week 14: April 11 (T): Quiz #11, I/O Subsystems (2)

Chapter 5 (5.4 through 5.6)

April 13 (R): I/O Subsystems (3)

Chapter 5 (5.4 through 5.6)

Week 15: April 18 (T): Quiz #12, I/O Subsystems (4)

Chapter 5 (5.4 through 5.6)

April 20 (R): Topics To Be Announced

Programming Project #3 due

Week 16: April 20 (T): Topics To Be Announced

April 22 (R): Topics To Be Announced

Final Exam Week: May 1 (Monday): Final Exam (comprehensive), 10:00 – 11:40 A.M.

• The list of the reading assignment is the minimum requirement. It is expected that each student voluntarily studies not only the required sections but other related sections or materials.
• If you have any problem for the above schedule, please contact to Dr. Fujinoki as soon as possible.
• Any question regarding this syllabus should be addressed to: hfujino@siue.edu

Course syllabus last modified at 11:30 A.M., January 9, 2017