Operating Systems
CS 314-002 Fall 2018 (CRN: 35263)

Welcome to CS 314!

Instructor: Dr. Hiroshi Fujinoki  
Office: EB 2034  
Email: hfujino@siue.edu  
URL: www.siue.edu/~hfujino

Office Hours: (1) Monday: 1:00 - 2:30 P.M.  
(2) Tuesday: 10:00-10:30 A.M.  
(3) Wednesday: 1:00 - 2:30 P.M.  
(4) Friday: 10:00 - 10:30 A.M.

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-0140  
Class Meeting Days: Monday and Wednesday  
Class Meeting Time: 3:00 - 4:15 P.M. (same time for M and W)

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

★ Course Prerequisites:  
CS286 (Computer Organization & Architecture) and CS240 (Introduction to Computing III)

★ Grading:  
Weekly Quizzes: 15%  
Programming projects: 20%  
Midterm Exam: 30%  
Final Exam: 35%

Weight:  
Final Letter Grade:
15%  
100-92: A
20%  
91-82: B
30%  
81-72: C
35%  
71-62: D
Below 62: F
Exams:
- Exams will be closed textbook and closed notes.
- Makeup exam will be given only for medical emergency (with a signed doctor's letter).
- Absence from an exam will result in zero point for the exam (except medical emergencies).
- If you need any special assistance, you should contact Dr. Fujinoki at least one week before.
- A calculator is allowed in the exams (however sharing a calculator during an exam is NOT allowed – everyone needs to bring your own calculator).
- Exams will cover reading assignments and required exercise questions.
- Any error regarding your graded exams should be reported to Dr. Fujinoki within two weeks (14 calendar days) after your attendance status is posted to the course web site.

Programming Projects (tentative plan): 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, 35, and 30% (for Project 0 (start-up), 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 some reasons (e.g. 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:
- There will be 12 quizzes during this course (each quiz takes 10 to 15 minutes). The quizzes are closed textbook, notebooks and neighbors (you are allowed to use your pens, pencils, blank papers, eraser(s) and a calculator during a quiz). After the last lecture in a week, the questions that will appear in the next quiz will be posted to the CS286-002 home.
- Makeup quizzes will be provided only for medical emergency (makeup quiz will not be provided for any other reasons).
- The lowest quiz will be dropped from your course grade at the end of the semester.
Reading Assignments:

Textbook: The course materials are presented using PPT slides in this course. The PPT slides are the summaries of the chapters/sections in a required textbook. Designated chapters in the textbooks are supposed to be read before each lecture. Subjects in the designated textbook sections 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 a written proof of medical service to waive the penalty).
  - Any error regarding your class attendance status should be reported to Dr. Fujinoki within two weeks (14 calendar days) after your attendance status is posted to the course web site.

◆ Academic Dishonesty:

Following activities (but not limited to them) will be considered academic dishonesty:

I. Weekly quizzes and exams:
   (a) Watching and copying your neighbors' solutions during quizzes and exams.
   (b) Using materials not allowed during quizzes and exams.
   (c) Anyone committing academic misconduct above (I-(a) or (b)) will receive a failing grade for this course and reported to the department chair as well as to the dean of the school of engineering.

II. Homework and programming projects:
   (a) Submitting work totally or partially done by somebody else (this includes any human/electronic sources (such as web sites and even another course at SIUE)).
   (b) Submitting program source code files (for the programming projects) that are developed by collaborations with other people. This includes both program designs and implementations.
(c) Anyone committing academic misconduct above (II-(a) or (b)) will receive a grade of zero on the assignment plus a warning, if possible, for the first infraction. Anyone committing a second infraction will automatically fail the course and/or be brought up on charges of academic misconduct, which may result in expulsion from the university.

♦ 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 at least 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 and the contents in the missed lecture (you are suggested to talk to your classmates).

(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. The decisions regarding which course materials are posted belong to the course instructor. If any promised course material is missing in the course home, it is your responsibility to request such material to the course instructor.

(5) Any grading problem should be reported within two weeks (14 days) after their grades are posted or the graded materials are returned in the classroom.
(6) Any electric device, such as smart phone, laptop PC, and tablet computer (except a calculator), should not be used during lectures and exams.

(7) E-mails sent to the course instructor during weekends and the break (spring break) may not be responded.

* 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><strong>Week 1:</strong></td>
<td>August 20 (M): Introduction to operating systems</td>
<td>Operating System Concepts (1)</td>
<td>Chapter 1 (1.1 through 1.7)</td>
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<td>August 22 (W): Operating System Concepts (2)</td>
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<td><strong>Week 2:</strong></td>
<td>August 27 (M): <strong>Quiz #1</strong>, Processes and process management (1)</td>
<td>Programming Project #0 assigned</td>
<td>Chapter 2 (2.1 through 2.5)</td>
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<td></td>
<td>August 29 (W): Processes and process management (2)</td>
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<td>Handout</td>
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<td><strong>Week 3:</strong></td>
<td>September 3 (M): Labor Day Holiday. University closed</td>
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<td>September 5 (W): <strong>Quiz #2</strong>, Programming project #1 discussions, Chapter 2 (2.1 to 2.5)</td>
<td>Processes and process management (3)</td>
<td>Handout</td>
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<td>Programming Project #0 due, Programming Project #1 assigned</td>
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<td><strong>Week 4:</strong></td>
<td>September 10 (M): <strong>Quiz #3</strong>, Threads and thread management (1)</td>
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<td>Chapter 2 (2.1 through 2.5)</td>
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<td></td>
<td>September 12 (W): Threads and thread management (2)</td>
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<td><strong>Week 5:</strong></td>
<td>September 17 (M): <strong>Quiz #4</strong>, Threads and thread management (3)</td>
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<td>Chapter 2 (2.1 through 2.5)</td>
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<td>September 19 (W): Process Deadlocks (1)</td>
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<td><strong>Week 6:</strong></td>
<td>September 24 (M): <strong>Quiz #5</strong>, Process Deadlocks (2)</td>
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<td>Chapter 3 (3.5 and 3.6)</td>
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<td>Programming Project #1 due</td>
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<td>September 26 (W): Programming project #2 discussions</td>
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<td>Handout</td>
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<td>Programming Project #2 assigned</td>
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<td><strong>Week 7:</strong></td>
<td>October 1 (M): <strong>Quiz #6</strong>, Deadlocks (3)</td>
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<td>Chapter 3 (3.5 and 3.6)</td>
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<td>October 3 (W): Memory Management (1)</td>
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<td><strong>Week 8:</strong></td>
<td>October 8 (M): <strong>Quiz #7</strong>, Memory Management (2)</td>
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<td>Chapter 4 (4.3 and 4.4)</td>
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<td>October 10 (W): <strong>Midterm Exam</strong></td>
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<td><strong>Week 9:</strong></td>
<td>October 15 (M): Memory Management (3)</td>
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<td>Chapter 4 (4.5 through 4.7)</td>
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<td>October 17 (W): Memory Management (4)</td>
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Week 10: October 22 (M): Quiz #8, File System (1)  
October 24 (W): File System (2)  
Programming Project #2 due  

Chapter 6 (6.1)  
Chapter 6 (6.2)

Week 11: October 29 (M): Quiz #9, Programming project #3 discussions  
October 31 (W): Programming Project #3 assigned  
File System (3)  
Handout  

Chapter 6 (6.3)

Week 12: November 5 (M): Quiz #10, File System (4)  
November 7 (W): I/O Subsystems (1)  

Chapter 6 (6.4)  
Chapter 5 (5.4 through 5.6)

Week 13: November 12 (M): Quiz #11, I/O Subsystems (2)  
November 14 (W): I/O Subsystems (3)  

Chapter 5 (5.4 through 5.6)

Week 14: November 19 (M): Thanksgiving Break. Classes not in session.  
November 21 (W): Thanksgiving Break. Classes not in session.

Week 15: November 26 (M): Quiz #12, I/O Subsystems (4)  
November 28 (W): Topics To Be Announced  
Programming Project #3 due  

Chapter 5 (5.4 through 5.6)

Week 16: December 3 (M): Topics To Be Announced  
December 5 (W): Topics To Be Announced

Final Exam Week: December 11 (Tuesday): comprehensive final exam, 2:00 – 3:40 P.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 6:25 P.M., August 19, 2018