Operating Systems
CS 314-001 Spring 2019 (CRN: 12914)

Welcome to CS 314!

Instructor: Dr. Hiroshi Fujinoki
Office: EB 2034
Email: hfujino@siue.edu
URL: www.siue.edu/~hfujino
Office Phone: (618) 650-3727
Office Hours: Monday: 10:00 A.M.-12:00 P.M. and 2:00-3:00 P.M.
Tuesday: 2:00-3:00 P.M.
Wednesday: 10:00 A.M.-12:00 P.M. and 2:00-3:00 P.M.
Thursday: by appointment (please make an appointment 24 hours prior to the time you want to meet the instructor).
Friday: 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 spring break, (2) the final exam week and (3) the week before the final exam week.

Class Meeting Room: EB-2170
Class Meeting Days: Tuesday and Thursday
Class Meeting Time: 9:30 - 10:45 A.M. (same time for T and R)

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

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

* Grading:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight</th>
<th>Final Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly Quizzes</td>
<td>15%</td>
<td>100-92: A</td>
</tr>
<tr>
<td>Programming projects</td>
<td>20%</td>
<td>91-82: B</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>30%</td>
<td>81-72: C</td>
</tr>
<tr>
<td>Final Exam</td>
<td>35%</td>
<td>71-62: D</td>
</tr>
<tr>
<td>Below 62: F</td>
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<td></td>
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</tbody>
</table>
Exams:
- Exams will be closed textbook and closed notes.
- Absence without a prior consent from Dr. Fujinoki will result in zero point except for medical emergency (a letter from your doctor is required).
- If you need any special assistance, you must contact to Dr. Fujinoki at least one week before.
- One letter-size cheat sheet and a calculator are allowed in the exams.

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, 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, 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 except for medical emergency (a letter from your doctor is required).
- There will be 12 quizzes during this course.
- Your lowest quiz will be dropped from grading.
- If we cancel some lectures, some quizzes may be dropped (the weight of the quizzes to the course grade is still 15%).

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 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 will 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 website.

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

(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 twice 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 (the course instructor will post such materials within at most one week since the request).

(5) Any grading problem should be reported within two weeks (14 days) after your grades are posted to the course home 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>
</tr>
</thead>
</table>
| Week 1 | January 14 (T): Introduction to operating systems Operating System Concepts (1)  
January 16 (R): Operating System Concepts (2) | Chapter 1 (1.1 through 1.7)                |
| Week 2 | January 21 (T): M. L. King Day (no class)  
January 23 (R): Quiz #1, Processes and process management (1) Programming Project #0 assigned | Chapter 2 (2.1 through 2.5) Handout        |
| Week 3 | January 28 (T): Processes and process management (2)  
January 30 (R): Quiz #2, Programming project #1 discussions  
• Programming Project #0 due  
• Programming Project #1 assigned | Chapter 2 (2.1 through 2.5) Handout        |
| Week 4 | February 5 (T): Threads and thread management (1)  
February 7 (R): Quiz #3, Threads and thread management (2) | Chapter 2 (2.1 through 2.5) Chapter 2 (2.1 through 2.5) |
| Week 5 | February 12 (T): Threads and thread management (3)  
February 14 (R): Quiz #4, Process Deadlocks (1) | Chapter 2 (2.1 through 2.5) Chapter 3 (3.1 through 3.4) |
| Week 6 | February 19 (T): Process Deadlocks (2)  
Programming Project #1 due  
February 21 (R): Quiz #5, Programming project #2 discussions  
Programming Project #2 assigned | Chapter 3 (3.5 and 3.6) Handout |
| Week 7 | February 26 (T): Deadlocks (3)  
February 28 (R): Quiz #6, Memory Management (1) | Chapter 3 (3.5 and 3.6) Chapter 4 (4.1 and 4.2) |
| Week 8 | March 5 (T): Memory Management (2)  
March 7 (R): Midterm Exam | Chapter 4 (4.3 and 4.4) |
| Week 9 | March 12 (T): Spring Break  
March 14 (R): Spring Break | |
| Week 10 | March 19 (T): Memory Management (3)  
March 21 (R): Memory Management (4) | Chapter 4 (4.5 through 4.7) Chapter 4 (4.5 through 4.7) |
| Week 11 | March 26 (T): Quiz #7, File System (1)  
March 28 (R): File System (2)  
Programming Project #2 due | Chapter 6 (6.1) Chapter 6 (6.2) |
Week 12: April 2 (T): Quiz #8, Programming project #3 discussions Handout

Programming Project #3 assigned

April 4 (R): File System (3) Chapter 6 (6.3)

Week 13: April 9 (T): Quiz #9, File System (4) Chapter 6 (6.4)
April 11 (R): I/O Subsystems (1) Chapter 5 (5.4 through 5.6)

Week 14: April 16 (T): Quiz #10, I/O Subsystems (2) Chapter 5 (5.4 through 5.6)
April 18 (R): I/O Subsystems (3) Chapter 5 (5.4 through 5.6)

Week 15: April 23 (T): Quiz #11, I/O Subsystems (4) Chapter 5 (5.4 through 5.6)
April 25 (R): Topics To Be Announced

Programming Project #3 due

Week 16: April 30 (T): Quiz #12, Topics To Be Announced
May 2 (R): Topics To Be Announced

Final Exam Week: May 7 (Tuesday): comprehensive final exam, 8:00 - 9:40 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 9:51 A.M., January 14, 2019