CSCI 3341 - 001
PRINCIPLES OF OPERATING SYSTEMS
Fall 2024

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Department: Computer Science
Office: 312C STEM
Office Hours: MWF 10:00 AM – 11:00 AM; T, Th 11:30 AM – 12:30 PM
(Other times by appointment)

GTA Office Hours: TBD (in STEM 320)
Class meeting: Time: T, TH 12:30 PM - 1:45 PM
Place: STEM 314

Credit hours: 3
Pre-requisites: CSCI 2314 and 3302
Grade Reminder: Must have a grade of C or better in each prerequisite course.
Course Description: Operating systems principles, memory management, and systems utilities.

Purpose of Course: The purpose of this course is to introduce students to the basic concepts of computer systems, to fundamental systems software, to a disciplined approach to problem solving, to procedural program development in a high-level language, to software engineering. The purpose of this course is to enable the student to develop an understanding of the integral role played by operating systems in a computing system. The components of an operating system are studied along with the interactions between software, hardware, and the user.

Program Learning Outcomes:
Program learning outcomes define the knowledge, skills, and abilities students are expected to demonstrate upon completion of an academic program. These learning outcomes are regularly assessed to determine student learning and to evaluate overall program effectiveness.

Students majoring in the Department of Computer Science may access program learning outcomes at http://www.sfasu.edu/academics/colleges/sciences-math/computer-science/about/accreditations

Student Learning Outcomes:
In general, SLOs in a course are specific and include the exact knowledge, skill or behavior taught in the course in support of the more global PLOs. For additional information on meaningful and measurable learning outcomes, see the assessment resource page http://www.sfasu.edu/assessment/index.asp.


Reference Books: Please refer to the syllabus link in the Purpose of Course section above.
**Course Requirements:** Students are expected to attend classes and ensure they understand the material being taught. Students are encouraged to ask questions and get their difficulties resolved while in class. Regular quizzes, homework assignments and examinations will test the student’s understanding of the material. The weight of these components is specified in the **Grading Policy** below.

**Course Calendar:** This course meets for a minimum of 37.5 lecture contact hours during the semester, including the final exam. Students have significant weekly reading assignments. Students are expected to complete homework/programming assignments, quizzes and 2-3 periodic exams in addition to the final exam. Students are expected to prepare for any class assignments or quizzes over the material covered in class or in the reading material. Successful completion of these activities requires at least 6 additional hours of outside of classroom work each week. In addition, the course will require **150 asynchronous minutes** to complete. This component will be addressed through attending a seminar/researching a relevant topic followed by a discussion board summary or a Quiz. Please see the schedule on the last page of the syllabus that details the topics to be covered during the semester. The schedule lists the reading assignments that the students are expected to follow.

**Grading Policy:** Overall grade will be based on the performance of the following components.
The grades in the course will be points totaling to 1000.

**Examinations:** (600 points) – short answer, problems, programs format – all exams are comprehensive
- Test 1 150
- Test 2 150
- Test 3 150
- Final Examination – 150

**Assignments:**
Class assignments (labs, homework assignments, and quizzes) will total 40% (400 point) of the course grade. Class assignments will be of unequal weight. Some of the class assignments may be required.

Grade bands are usually **90+ A/80+ B/70+ C/60+ D/ 59 and lower F**

**Exam Note:** Examinations are weighted at 60% of the overall course grade. Valid student ID cards must be presented on each examination day. (No ID... No exam...Grade of zero)
There are no exemptions from the final examination and no changes in taking the final examination. If the final exam time is a problem, you need to drop this course.

**Attendance policy:** Attendance and constructive class participation is expected. There is no specific grade for attendance, but **students who participate and have full attendance (except for excused absence) will qualify for up to a 5% bonus grade provided 75% of the class also completes the end of the semester course evaluation.** The Dean of Students Office will help to notify faculty of a student’s absence for certain parameters. You can go HERE to learn more about this new process and also submit the form. It is still at the faculty member’s discretion on any missed assignments, tests, etc.

**Educational Objectives** Upon successful completion of the course, students should be able to:
Upon successful completion of the course, students should be able to:
1. Know how process level execution works.
2. Create and design programs on the process level.
3. Discuss how to create programs that must share processor time and memory resources.
4. Understand how an Operating System handles process scheduling.
5. Apply process management, memory management, file management, communications management, and device management to different artifacts and designs.

Course Content Hours
The following topics with estimated hours spent on each is listed below:
• Introduction (2)
• Process Management (9)
• Memory Management (6)
• Scheduling Theory (6)
• Storage Management (6)
• System Libraries and Utilities (3)
• Concurrency and Parallelism (3)
• Protection and Security (6)
• Exams (4)

TOTAL 45 (Approximately 150 minutes of instruction will be asynchronous.)

Academic Integrity (4.1)
The Code of Student Conduct and Academic Integrity outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy.

Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to: (1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or permitting another person to substitute for one’s self, to take a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities.

Plagiarism is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements.
Collusion is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam.

Misrepresentation is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially.

**AI use:** Work submitted for grading must be your own. Use of AI-generated material for homework, quizzes, or exams is a violation of SFA's academic integrity policy (see Plagiarism above).

**Withheld Grades Semester Grades Policy (5.5)**

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the coursework because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course to compute the grade point average. For additional information, go to https://www.sfasu.edu/policies/course-grades-5.5.pdf.

**Drop Policy (Univ.):** The official university add/drop policy is located at https://www.sfasu.edu/docs/hops/04-103.pdf. If you have questions concerning registration, add/drop, or the withdrawal process, please refer to the Registrar’s website.

**Students with Disabilities**

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodation. For additional information, go to http://www.sfasu.edu/disabilityservices/.

**Student Wellness and Well-Being**

SFA values students’ overall well-being, mental health and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.

If you are experiencing concerns, seeking help, SFA provides a variety of resources to support students’ mental health and wellness. Many of these resources are free, and all of them are confidential.

**On-campus Resources:**

**The Dean of Students Office** (Rusk Building, 3rd floor lobby)

www.sfasu.edu/deanofstudents

936.468.7249
dos@sfasu.edu
The Health and Wellness Hub “The Hub”
Location: corner of E. College and Raguet St.

To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include:

- Health Services
- Counseling Services
- Student Outreach and Support
- Food Pantry
- Wellness Coaching
- Alcohol and Other Drug Education

www.sfasu.edu/thehub
936.468.4008
thehub@sfasu.edu

Crisis Resources:

- Burke 24-hour crisis line: 1.800.392.8343
- National Suicide Crisis Prevention: 9-8-8
- Suicide Prevention Lifeline: 1.800.273.TALK (8255)
- Crisis Text Line: Text HELLO to 741-741

Schedule -

TENTATIVE COURSE SCHEDULE

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<th>Topic</th>
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<td>Week 1 Process Management</td>
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<td>Week 2 Process Management</td>
<td>HW1</td>
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<td>HW2</td>
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<td>Week 8 Storage Management</td>
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<td>Week 9 Storage Management</td>
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<td>Week 10 System Libraries</td>
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Week 11 ConcurrencyHW4
Week 12 Parallelism
Week 13 Protection and Security
Week 14