Course Description

Operating Systems Theory and Practice (3:3:0) **Prerequisites: INFS 501, INFS515, and INFS590 or equivalent.** Fundamental concepts including process synchronization and scheduling, inter-process communication, memory management, virtual memory, deadlocks, security and access-control, file and disk management, performance analysis, and distributed systems. The impact of computer architecture on operating systems is examined. Case studies and comparative analysis of operating systems are presented. No substitution can be made for this class.

Email

Email is the recommended mode of communications. Answers to technical questions may be redistributed to other students via E-mail or the course web site. You are expected to have a [GMU E-mail address](mailto:example@odu.edu) for this course. Check the course web site regularly for updates and announcements as applicable. Preface all email message subject lines with “INFS601: “

**DO NOT INCLUDE STUDENT ID ON HOMEWORK SUBMISSIONS OR EMAIL MESSAGES!**

Attendance

Not taken for credit at lecture or lab, but you are responsible for all material presented in class/lab whether or not it is in the published notes. Therefore, attendance is strongly recommended in order to achieve the highest course grade. If you are late for class, please enter the class quietly and sit by the entrance to minimize the disturbance to the rest of the class. An attendance sign-up sheet will be distributed sometime during the class. Please sign only your name.

Homework/Project Assignments

Homework and project assignments (if assigned) are posted on the course web site and/or given in class. Homework and project assignments are due **BEFORE** the end of class (i.e., lecture) on the due date. **If you are not able to submit your homework/project assignment in class,** you may submit via email before the due date/time to the TA with a courtesy copy to the instructor. The student is responsible for ensuring that email submitted homework is received before the due date/time. Thus, the student needs to account for possible delivery delays of email systems.

Show intermediate work as appropriate when submitting homework and project assignment answers.

Homework and/or project assignments submitted **AFTER** the assignment is due will not be accepted.

The lowest single homework score will be dropped. Homework and project assignments are graded for correctness.

Homework and project assignments should be neatly typed. **Readable handwritten assignments are acceptable.**

The instructor may discard unclaimed graded assignments after two weeks past the original due date. **All unclaimed assignments will be discarded after the final exam.**

Since the difficulty of each homework assignment may not uniform, the later more difficult homework assignments will carry more weight than the earlier homework assignments.

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Projects

The projects for this class will help reinforce the class material by giving you programming experience using operating system mechanisms like processes, threads and synchronization. The projects will require student to develop JAVA programs utilizing these operating system concepts. Details relating to the project will be given in class. There will be 3-5 projects for this class. The first 1-2 projects will help students review their programming skills and knowledge of JAVA. If you have used a different programming language in the prerequisite to this course, or if it has been awhile since you last programmed, one of a student’s responsibilities in this course is to review JAVA more extensively before attempting the programming assignments.

Since the difficulty of each project is not uniform, the later more difficult projects will carry more weight than the earlier projects. Also note that each programming assignment is to be an individual effort. The instructor understands that you may look to other students for help with the basic concepts needed to solve the programming problems. This is acceptable, however, you cannot copy the work of others. You may also consult the Internet, or other texts, for ideas on how to solve the programming problems. However, you are strictly forbidden from copying programs you find on the Internet and turning them in as your own. If you have any questions about this policy please ask the instructor.

Contact the TA for JAVA programming language questions.

Projects are performed individually by each student.

Exam Policy

Students who arrive more than 15 minutes late for any exam or quiz will not be permitted to take the exam/quiz and will automatically receive a grade of zero for that exam/quiz.

Makeup exams are very rarely given. Requests for a delayed Final Exam due to multiple tests (>2) in one day will ONLY be considered if proper forms are completed and in the instructor's hands on or before the mid-term grading period ends.

(excerpts) From the 2000-2001 University Catalog:

- A student who misses an exam without an excuse may have the course grade lowered.
- Students must not be required to submit examinations before the date of the regularly scheduled examination for a course. Final reexaminations are not permitted.
- Absence from final examinations will not be excused except for sickness on the day of the examination or for other cause approved by the student’s academic dean/director.

From the Schedule of Classes:

- Students who have more than one examination scheduled at the same time or more than two examinations scheduled on the same day should consult their academic dean to request rescheduling.

There will be only one makeup final exam for those students who have received authorization from the instructor to take the final exam at the other than the normally scheduled time. This makeup exam will be given the day following the regularly scheduled final exam at the same time or as announced by the instructor.

Since the College of Arts and Sciences does not have a specific procedure, those students in CAS who are eligible to take the final exam at the makeup exam time should follow the School of IT&E procedures and fill out the appropriate forms and return them to the instructor on or before mid-term grading period ends. No requests for any reason will be accepted after that date.

Class Demonstrations & Exercises

Throughout the semester, live in-classroom demonstrations & exercises of various computer organizations and architectures may be shown. There will be questions on the quizzes/exams about these demonstrations & exercises.
Exam & Quiz Formats

All exams and quizzes are closed book and notes, unless otherwise specified. There will be unannounced quizzes. The lowest single quiz score will be dropped.

Exams and quizzes are both essay and problem solving based.

There are no make-ups for missed quizzes.

The final exam will be comprehensive.

Quizzes and exams will cover all material discussed through the prior class (including the current reading assignment) and will emphasize material covered during class lectures and labs.

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Reading Assignments

Reading assignments are posted on the course web site and/or given in class. Students are expected to have read the assigned material before the corresponding lecture in which the material will be discussed.

Lectures

Recording of lectures with any type of electronic or electro-mechanical recording device is not permitted.

Some class sessions will be part lecture and part exercises (second half of session) while others are all lecture based.

Lecture sessions may include current developments (i.e., events) in INFS in the area of computer system organization and architecture.

Lecture Slides

The lecture slides are available for students from the publisher. Refer to the course textbook resource web site. Note: Instructor slides shown in class contain corrections to those found in the textbook resource web site.

Some lecture material will be from external sources (not contained in the class slides).

Course information posted on the course web site will be in PDF format. Free PDF file reader (Version 7) can be downloaded from here http://www.adobe.com/products/acrobat/readstep2.html.

Plagiarism

You must clearly indicate any and all instances when your work includes, is based on, or is derived from the work of others. Just be sure to include explicit in-line citations where applicable. Any violations are sufficient to receive a failing grade.

Honor Code

You are encouraged to collaborate with other students for general studying. Exams are closed book, closed notes, and no use of calculators. The normal Honor Code applies to all exam, quizzes, lab assignments and term papers/presentations.
TextBooks

Required:


Optional:


Be sure to check the textbook web site on a regular basis for errata sheet updates.

Grading Policy

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<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Homework/Quizzes</td>
<td>20%</td>
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<tr>
<td>Projects</td>
<td>30%</td>
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<tr>
<td>Mid-Term Exam</td>
<td>20%</td>
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<tr>
<td>Final Exam</td>
<td>30%</td>
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The final course grade is based on an absolute standard of the weighted sum of all grades (absolutely NO grades will be dropped nor a curve applied to the grades).

Plus/Minus grades will be used as indicated:

- A+: 100-97
- A: 96-93
- A-: 92-90
- B+: 89-87
- B: 86-83
- B-: 82-80
- Cs: 79-60
- Fs: <60

Schedule

The list of chapters and topics to be covered on a weekly basis are on schedule, which is posted on the course web site and/or given in class. The schedule of topics discussed and assignments is subject to change during the progression of the semester.

Students with Disabilities

If you need special assistance, please inform the instructor soon as possible so that appropriate arrangements can be made.

Course Web Site

Suggest that students visit the course web site often to check for updates. Also, make local copies of information from the web site and the WWW in case the web site is unavailable for an extended period of time.

The course web site contains the most current course information.

Computer Labs

There are several Computer Labs available for general use by IT&E students, which are located on the Fairfax campus. For more information go to the web site at [http://ite.gmu.edu/labs](http://ite.gmu.edu/labs). One such lab is in ST2 Room 137.