

**CS 421: Operating Systems (4)**  
**MWF 2pm-3pm Hoyt Science UNIX Lab**  
**Westminster College, Fall 2005**

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**Instructor:**

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**Text:** *UNIX Systems Programming*, Kay Robbins and Steven Robbins, Prentice Hall, ISBN #: 0-13-042411-0

*A Practical Guide to Linux Commands, Editors, and Shell Programming*, Mark G. Sobell, Prentis Hall PTR, ISBN #: 0-13-147823-0, This book is optional but highly recommended

**Prerequisite:** CS 331

**Web page:** <http://www.cs.westminster.edu/~shaffer/Courses/CS421>

**Content:**

- Operating Systems Concepts/structure
- Basic POSIX system calls
- Processes/interprocess communication
- Synchronization and deadlock
- Input/Output principles
- Memory Management
- File systems
- Network communications

**Your responsibilities:**

- Read ahead and understand text material.
- Complete/master the text, homeworks, labs and projects.
- Seek help **immediately** if you are struggling.
- Learn the material (sometimes in spite of presentation format).
- **Substantial** work outside of class.

**Attendance:** You are expected to attend all classes. Attendance will not constitute part of your grade but failure to attend will result in no credit for missed assignments, tests, quizzes, labs etc. Additionally, failure to attend will probably result in poorer performance on exams. **I do not provide class notes to students who miss class, excused or unexcused.**

**Grading:**

Letter grades are assigned based on the percentage of the available points that you receive. The grading scale is fixed. **I do not curve.** The grading scale is as follows:

| Letter | Percentage | Letter | Percentage |
|--------|------------|--------|------------|
| A      | [92,100]   | A-     | [90,92)    |
| B+     | [88,90)    | B      | [82,88)    |
| B-     | [80,82)    | C+     | [78,80)    |
| C      | [70,78)    | D      | [60,70)    |
| F      | [0,60)     |        |            |

Below is an **approximate** breakdown of the point value of the material:

|  |     |
|--|-----|
| Programming assignments, homeworks, labs | 60% |
| Midterm exam                             | 20% |
| Final exam                               | 20% |

**Attendance:** You are expected to attend all classes. Attendance will not constitute part of your grade, except in labs, but failure to attend will result in no credit for missed assignments, tests, quizzes etc. Additionally, failure to attend will probably result in poorer performance on exams. **I do not provide class notes to students who miss class, excused or unexcused.**

**Homework:**

Homeworks are given in order to help clarify text material. You will receive 5 points for each homework if it is clear that you made an honest effort to complete the entire assignment correctly. I do not “mark up” these papers so if you are uncertain about your answer to any of the problems, please ask me about it...chances are that someone else in the class has the same question. Incomplete or substantially incorrect papers (particularly those clearly done in haste) will receive 0 points. **If a homework assignment includes programming problems** you are well-advised to test your solutions to these problems (and to hand in a print-out of your solution).

**In-class exams:**

There will be 3 in-class exams during the semester worth 150 points each. There will be a final exam worth 200 points.

**Quizzes:**

Quizzes may be given at any time throughout the semester. They will be worth 10 to 15 points each. Make sure you follow lectures and complete homework and reading assignments to help you prepare for quizzes.

**Projects:**

There will be approximately 7 projects during the semester worth 15 to 45 points each. These are graded based on completeness and quality of work. It is your responsibility to thoroughly test your solutions to the problems.

**“Open” projects:** These are designed for learning purposes only and you may cooperate with others to any extent that you desire. I highly recommend that you complete as much of these projects on your own as you can since you will need to master this material for quizzes, exams etc.

**“Individual” projects:** Absolutely no cooperation is permitted on individual projects. Keep your work to yourself and don’t copy or seek help from others. You are not permitted to use any person’s help or code, except help which I provide to you specifically, in completing your projects. You are not permitted to discuss your solutions to these projects with anyone else. These rules extend beyond students in our class. That is, you are not permitted to seek help from friends, tutors etc.

**“Group” projects:** Absolutely no cooperation is permitted outside of your pre-assigned group. Keep your group’s work to yourself and don’t copy or seek help from anyone outside of your group. You are not permitted to discuss your solutions to these projects with anyone who is not in your group. If any individual member of a group breaks these rules the entire group may be held responsible. These rules extend beyond students in our class. That is, you are not permitted to seek help from friends, tutors etc.

Should you ever find yourself questioning whether you, another group member, or another class member have been completely honest (in accordance with the above policies) in the completion of a project please come talk to me **right away**.

**Academic policies:**

The department of Mathematics and Computer Science has a set of guidelines regarding academic honesty which can be found at: <http://www.westminster.edu/staff/bonomojp/cheating.html>

Unless otherwise specified all exams and projects must be entirely individual work. “Verbal” cooperation on lab projects is encouraged but the exchange of programs or program fragments either electronically or by visual inspection is not allowed. Keep your work to yourself and don’t copy from others.

Cheating on exams, quizzes or projects will result in a grade of 0 (zero) for that item. All academic policies offenses will be referred to the college dean.

**Disabilities and special needs:** I will make any necessary, reasonable accommodations for students with disabilities.

If you have a disability which requires accommodations, it is your responsibility to indicate to me that you have a disability and to discuss with me what special needs you might have regarding this class. In addition to notifying me, if you have a disability which requires class accommodations, you must make it known to Westminster College’s student affairs office so that they can send me the proper paperwork.