

COMS3102  
Fall 2016

Dan Mechanic  
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## Using Linux

Subject to Change. Last Update: September 8, 2016

**Time and Place:** Fall 2016; Wednesdays 6:10PM - 8:00PM, CLIC Lab

**Course Description:** This course is designed to develop students comfort level with the Linux Operating System, standard Linux Tools and Bash Scripting.

### Instructor:

Dan Mechanic [mechanic@columbia.edu](mailto:mechanic@columbia.edu) - Please put COMS3102 in the subject line.

### Office Hours:

Mondays: 5:30pm Uris 328

Fridays: 5pm Uris 329

### Teaching Assistants:

All TA office hours are held in 122 Mudd, the Computer Science Department TA Room. Contact information and office hours will be posted on Courseworks at the start of the semester.

Sneha Nagaraj Bangalore [sb3889@columbia.edu](mailto:sb3889@columbia.edu) - Fridays Noon - 1 PM

Tushar Agarwal [ta2482@columbia.edu](mailto:ta2482@columbia.edu) - Tuesday 1:30 - 2:00 PM

Dan Mechanic [mechanic@columbia.edu](mailto:mechanic@columbia.edu)

### Required Textbook:

NONE

### Reference Textbook (*not required*):

- William e. Shotts Jr., *The Linux Command Line - A Complete Introduction*, No Starch Press, 2012. ISBN-13: 978-1-59327-389-7

### Course Topics:

The main course topics will include:

- What is Linux? The history of Unix and the Unix Philosophy.
- The Linux Environment
- Files and IO Redirection
- Standard and Powerful Linux Tools
- The Bash Shell and Bash Scripting

This course will prepare students to tackle future tasks using Linux.

**Course Schedule:**

Lecture Schedule *Subject To Change*

1. *September 7* Linux History and Family. The Unix Philosophy. Free Software. Intro to the Linux Environment. Simple Editing.
  - Lecture 1 Slides
  - Supplemental Readings:
    - What is free software?
    - Philosophy of the GNU Project
    - History of the GPL
    - Various Licenses and Comments about Them
    - The Linux Kernel Archives
2. *September 14* Files and the Linux Filesystem. Editors. Revision Control.
3. *September 21* The Bash Shell. Startup. IO Redirection. Aliases and Functions. Positional Parameters.
4. *September 28* Standard Linux Tools and Regular Expressions.
5. *October 5* More Tools. Processes and Signals.
6. *October 12* Some System Topics. Final Prep.
7. *October 19* Final Exam

**Exam Schedule:** The final exam is scheduled in-class during the final class.

**Homework:** There will be 5-7 homework assignments worth 60% of your final grade.

You will have approximately one week to complete each homework assignment. There is a 6 hour grace period after the official deadline of each assignment during which you can submit without penalty. Beyond that, no late homework is accepted without permission from the instructor before the original deadline.

All homework must be done individually. Please review the Computer Science Department's policy on academic honesty.

Cheating will not be tolerated.

**Grading:** The course grade will be based on 5-7 homework assignments (60%) and a final exam (40%)