

ITMO/IT-O 456 Introduction to Open Source Operating Systems

Spring 2015 Syllabus

Professor Jeremy Hajek

Professor: Jeremy Hajek*E-mail:* hajek@iit.edu*Office:* Rice Campus 228 and Main Campus Perlstein Hall 223*Office Hours:* Main Campus: T & TH 12:30 to 2:30 Rice Campus Wednesday 1 pm to 3 pm.

Course Catalog Description: Students learn to set up and configure an industry-standard open source operating system, including the actual installation of the operating system on the student workstation. Also addressed are applications and graphical user interfaces as well as support issues for open source software.

Prerequisites: None**Credit:** 2-2-3 Semester Hours**Lecture/Lab Day, Time & Place:** Monday 1:50pm – 5:25pm, Rice Campus room 207**Schedule of Topics/Readings:** *All readings should be done prior to class.*

Class Session	Date	Topic/Lab	Reading
1	January 12	Introduction to Open Source Software	Chapter 1
	January 19	No Class MLK Holiday	
2	January 26	Installing Linux	Chapters 2, 3
3	February 02	Using Fedora and the Shell	Chapters 4, 5
4	February 09	Linux Filesystem	Chapters 6, 11
5	February 16	Linux Utilities	Chapter 7
6	February 23	Bourne Again Shell (BASH)	Chapter 9
7	March 02	Installing Software and Basic Tasks	Chapters 12, 15
8	March 09	BASH Scripting	Chapter 27
	March 16	NO CLASS - SPRING BREAK – Mid-term assigned	
9	March 23	System Administration	Chapter 10
10	March 30	Remote Administration & Host Firewall	Chapters 18, 25
11	April 6	Apache Webserver	Chapter 26
12	April 13	FTP & Mail Servers	Chapters 19, 20
13	April 20	SAMBA & BIND	Chapters 23, 24
14	April 27	Vagrant and Packer.io	
15	May 04	Final Exam Review	
16	May 11	Final Examination (take home)	

Required Textbook:Mark G. Sobell *Practical Guide to Fedora and Red Hat Enterprise Linux, 7th/ED* Prentice Hall,

ISBN-10: 0133477436; ISBN-13: 9780133477436; Available at:

<http://www.pearsonhighered.com/educator/product/Practical-Guide-to-Fedora-and-Red-Hat-Enterprise-Linux-A/9780133477436.page>
Course Materials:

- Fedora 20 & 21
- Ubuntu 14.04.1
- Virtual Box (provided)
- Vagrant
- Packer

Course Objectives:

Each successful student will be able to demonstrate foundation knowledge of the Linux operating system and will be prepared to pass the Linux+ certification exams from CompTIA. The course will be taught to the Linux+ objectives which are now the same as the Linux Professional Institute LPIC-1 level.

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Course Outcomes:

Students completing this course will be able to:

- Install, configure and administer an industry-standard distribution of the Linux operating system
- Troubleshoot and resolve Linux installation problems and common system problems
- Use and administer Linux as both a server and desktop operating system

Course Notes: Copies of the course lecture notes will be provided in the form of Microsoft OneNote. The public URL will be provided in Blackboard under the CONTENT section. All students will have read and edit access to these notes as well.

Readings: Readings for the class will be assigned from the textbooks; there may be additional reading assigned in the form of online reading. All readings should be done before coming to class on the assigned date, and are *mandatory* and *expected*. Generally if you do the readings you will *excel* in the course, as the lectures serve as a clarification and explanation of material you should already be familiar with. Completion of reading may be verified by quizzes. Specific readings are assigned by topic above.

Attendance: As this is a live laboratory class and demonstrations of operating system configuration and functions are a key part of the class, attendance is critical. If you will not be able to attend class, please notify the instructor via email prior to class time. It is possible to arrange for absences in advance but they must be arranged by discussion with the instructor in advance.

Labs: Will be assigned weekly and will reflect on the material assigned each week. The Lab assignment will be due at the start of the following week of class (7 days). Lab reports will be submitted via the Blackboard assignments page.

Podcasts: There will be a podcast listening or viewing assignment each of the first 13 weeks – these podcasts will be due 12 days after the date of class which it is assigned. All podcast submissions will be turned in through Blackboard.

Homework: Homework will be called Review Questions and will be assigned each week. They will be submitted through Blackboard (due to a strange naming convention Blackboard considers them Tests – but they are not) The questions will be answered directly on Blackboard and will be due 12 days after initial assignment and be of multiple submission/retry open notes and book.

Examination: The final examination will consist of multiple choice, fill-in-the-blank, short answer, and short essay questions to demonstrate mastery of the material covered and to reflect preparation to pass a certification exam on this material. Questions will be based on the learning objectives for each topic. The midterm and final exam will be open book open note online exams.

Academic Honesty:

Plagiarism: All work you submit in this course **must be your own**. You must fully attribute **all** material directly quoted in papers and you must document all sources used in the preparation of the paper using complete, APA-style bibliographic entries. Including directly quoted material in an assignment without attribution is always plagiarism and will always be treated as such by me. No more than thirty-three percent of material included in any paper may be direct quotes. Students have submitted plagiarized material the last six times I have taught this course and **I will not tolerate it**. If you submit plagiarized material you **WILL** receive a grade of **ZERO** for the assignment, an Academic Honesty Violation Report will be filed, and it may result in your expulsion from the course with a failing grade as per the IIT and ITM academic honesty policies. **There is no excuse for not understanding this policy** and if you do not understand it please let me know and I will be happy to discuss it with you until you do. (*Should include assignment or lab collaboration statement as necessary.*)

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Grading: Grading criteria for ITMO/IT-O 456 students will be as follows:

A	<i>Outstanding work reflecting substantial effort</i>	90-100%
B	Undergraduate/IT Students: <i>Excellent work reflecting good effort</i>	80-89.99%
B	Graduate Students: <i>Satisfactory work fully meeting expectations</i>	80-89.99%
C	Undergraduate/IT Students: <i>Satisfactory work meeting minimum expectations</i>	70-79.99%
C	Graduate Students: <i>Substandard work not meeting expectations</i>	65-79.99%
D	Undergraduate/IT Students: <i>Substandard work not meeting expectations</i>	60-69.99%
	Graduate Students: Graduate students may not be assigned a D grade	N/A
E	Undergraduate/IT Students: <i>Unsatisfactory work</i>	0-59.99%
E	Graduate Students: <i>Unsatisfactory work</i>	0-64.99%

The final grade for the class will be calculated as follows:

Homework/Labs/Podcasts	50%
Quizzes and Class Participation	20%
Final Exam	30%

Other Class Resources: Online readings and other class resources are on <http://blackboard.iit.edu>.

Our Contract: This syllabus is my contract with you as to what I will deliver and what I expect from you. If I change the syllabus, I will issue a revised version of the syllabus; the latest version will always be available on Blackboard. Areas with changes will be indicated by a black bar in the right-hand margin of the page.

Computer Labs: Class will be held in room Rice Campus room 207, a lab administered by the IIT School of Applied Technology Technical Services. Each student will be assigned to a particular PC and will use the same system for the duration of the course. Your operating system will be on a removable hard drive which may be available for checkout from the instructor for lab use outside of class meeting times.

PC Shutdowns: Please turn off the monitor and properly shut down the computer at the end of each class.

Computer Use Policies: Please ensure that you have read and understand the IIT and ITM Network and Computer Use Policies found at <http://www.itm.iit.edu/data/ITMComputerUsePolicies.pdf>.

Disabilities: Reasonable accommodations will be made for students with documented disabilities. In order to receive accommodations, students must obtain a letter of accommodation from the Center for Disability Resources and make an appointment to speak with me as soon as possible. My office hours are listed on the first page of the syllabus. The Center for Disability Resources (CDR) is located in 3424 S. State St., room 1C3-2 (on the first floor), telephone 312.567.5744 or disabilities@iit.edu.