**COP 3931.164/165 U14 –   
Linux Network administration**

**Overview**

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| **Course Information** | Prefix:  Number:  Title:  Ref#:  Col / dept:  Section(s):  Semester: | COP  3931  Linux Network Administration  20813  / 18076  TT / EIT  164 /165  Summer 2014 |

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| **Instructor Information** | Matthew McDermott  Information Technology Department | |
|  | Email:      Phone:  Other:  Office Hours: | Matthewm1@mail.usf.edu personal / private questions only, use Canvas forums for course-related questions - (if you don’t hear from me within 48hrs, your email was lost - Resend it!   Spam filters are unforgiving tools.)  N/A  Canvas  forums (preferred for non-personal questions)  Through Collaborate (link provided on Canvas site in “Collaborate Sessions” section) or face-to-face on campus. By appointment ONLY, email first. |

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| **Course Pre-requisites** | COP3931 User-level introduction to Linux |

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| **First day attendance policy** | Since this course is 100% online, there will be no mandatory class meetings. Therefore, the first day attendance policy will require you to login to Canvas, participate to the first week activities. The specifics of what you have to do in order to be marked “present” for the first week will be detailed in an announcement from your instructor. The instructor will remove from the course the students who didn’t complete these tasks during the first week in accordance to USF first day attendance policy. |

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| **Course Meeting Time(s) and Location** | Class                      No mandatory class meeting – Online Asynchronous Course  Office Hours         – by email appointment    While this course is online asynchronous, you are strongly encouraged to contact your instructor to set up one-on-one or small groups Collaborate meetings in order to benefit from more interactive teachings. Other times than the official office hours will be accommodated as much as feasible. |

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| **Optional Text(s)** | Chemical Reaction Engineering -9780596005481  **Linux Network Administrator's Guide 3rd Edition By Tony Bautts, Terry Dawson, Gregor PurdySybex.**  ISBN 9780596005481  <https://docs.google.com/gview?url=http://it-ebooks.info/read.php?id%3D2198-1400124401-243b3b0252e97034ddcbf1a0029b25e5&chrome=true> |

**Course Scope and Contents**

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| **Course**  **Description** | System administration of services and software usually deployed on a Linux workstation using various mainstream Linux distributions. |

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| **Course Objectives** | At the conclusion of the course, the student should be able to:  -          Assess the suitability of various technology to given requirements; make appropriate recommendation on their deployment  -          Deploy the technologies studied in this offering on Linux servers using various distributions |

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| **Tentative Schedule** |  |

| Module | Weeks  # | Lecture Topic | Exams | Graded Quizzes |  |
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| START RIGHT HERE | 1 | Welcome Aboard/DNS & Proxy |  | First Day Attendance --- Graded Discussion |  |
| Weekly Online Modules | 2 | VPN and Firewalls |  | GQ-02 | Week #1 and 2 Materials |
| 3 | LDAP /Samba |  | GQ-03 |  |
| 4 |  | E1 |  |  |
| 5 | NFS & FTP |  | GQ-04 |  |
| 6 | Email and Print |  | GQ-05 |  |
| 7 |  | E2 |  |  |
| 8 | Large Scale/File Integrity |  | GQ-06 |  |
| 9 | IDS/Log Analysis |  | GQ-07 |  |
| 10 |  | E3 |  |  |

*Please note that I retain the right to change the course schedule based upon the needs of the course and students.  Any changes will be communicated within the Course Announcements.  Students should log in daily or check Canvas frequently to ensure they are on the current schedule and meeting the deliverable for the offering.*

**Methods of Instruction**

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| **Teaching Philosophy** | This course is designed and taught with the belief that;  (1)     Faculty’s primary role is to facilitate students’ own learning, not to learn the material on their behalf or focus on exhibiting mastery of a field to a passive audience (archetype of the “*sage on the stage*”). To quote A. Fabel "*Real education – is not something performed on someone, nor is it something one gets; it’s something one does for oneself*” ('The Computer as a Convivial Tool' in Haret & Papert (Eds.) Constructionism, 1991).  (2)     Students do not expect faculty to read aloud the textbook for them (classical 3hrs monologues with occasional colorful slide) but instead expect to be helped to internalize the concepts (e.g. discussion, active learning, peer learning) and practice them (e.g. hands-on activities, discovery learning). Confucius is credited to have said “*I hear and I forget, I see and I remember, I do and I understand*”. Let’s make sure we keep learning an interactive and active endeavor rather than a passive listening practice; no one ever got a degree from watching the discovery channel.  (3)     Everyone in the course has the highest expectations about ensuring that graduating from this course is based on developing new knowledge and skills. This means reliance on hard work rather than self-entitlement or favoritism. |

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| **Overview** | Instruction will rely on various pedagogical strategies involving weekly mandatory learning activities for which students will be assigned hard deadlines. It is easy to fall behind in an online offering if such deadlines are not enforced to pace the learning. Be aware that enrolling in this course means that you will have to abide to these deadlines and have enough time each week to complete your assignments (graded or non-graded). Failure to do so will impact your grade through loss of participation points and lesser performance. |

**Students’ Learning Activities**

In each module, students will be expected to actively and qualitatively participate in the following graded and non-graded activities. Non-graded learning activities are not optional, they are essential in preparing students to graded ones. Students should expect to devote a minimum of 12 hours each week to this offering.

**Reading Assignments**

Students will be assigned readings from the textbook and/or web resources every week. Practice quizzes will help ensure that the material from each reading assignment is understood. A forum will be available to students for asking questions about anything which is not 100% understood about the reading assignment. Students are encouraged to get familiar with each others’ questions, answer the others’ to the best of their knowledge. The instructor will wrap up each discussion thread regularly.

**Support Forum**

The support forum is non-graded and solely there to allow students to post any question they might have on the reading assignments’ materials. You are encouraged to attempt answering your peers’ questions in order to be able to have the instructor confirm / correct what you think is the right response. The instructor will participate to help students.

**PA – Practice Assignments**

Students will be expected to experiment with various Linux technologies on their machine and share their details findings / help each other through the support forum. Participating will therefore entail learning to interact with peers to solve technical problems related to installing and setting up Linux applications. Students will be expected to work on the virtual machine provided for this offering and use the forums to both ask for help, share the results of their experimentations and help others by replicating / addressing their technical issues.

**DF – Discussion Forums**

Students will be expected to participate, via online forums, to weekly discussions with their peers and instructors. The topics will entail a variety of different perspectives on open source;

-          **Technical**                     e.g. what are the dominant web serving Linux technologies

-          **IT Management** e.g. is open source cheaper than commercial solutions

-          **System Administration** e.g. what are the benefits of an open source kernel in terms of flexibility for a system administrator to suit it to his/her company’s requirements.

The intent is to build students’ general knowledge on open source, its limitations, possibilities and deployment in the IT landscape. A document specifying the expectations on posts quality will be provided to students during the 1st week. Students should expect to devote about 2 hours weekly to this activity.

**GQ – Graded Quizzes**

Every week, a graded quiz will test students on their understanding of the material, including non-graded activities.

**Learning Outcomes Assessment**

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| **Evaluation of Student Outcomes** | Students will be evaluated using diverse online assessment tools.    -          1 First week quiz, 10 points  -          7 Graded quizzes, 10 points each, total  70 points  -          7 weekly Discussion forums, 5 points each, total  35 points  -          3 Exams,  20 points each, total  60 points    It is important for every student to understand that these graded activities are meant to evaluate them on how well they have learned the material. Non-graded learning activities are available to help students ensure of their understanding of the material prior to these evaluations. Skipping practice, opportunities to ask questions or receive feedback is not recommended. Doing so often leads to poor performance at graded assignments.    **Optionally, participation to other surveys or specific activities** will be rewarded by extra credit points. The amount of points and opportunities to participate to such surveys and activities will be announced on the course’s Canvas site. These are optional and might not be available this semester, plan on passing the class through the above-mentioned exams, not through last minute extra-credits activities. |

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| **Grading Criteria and/or Scale** | Incomplete grades will be given only if a majority of the class work has been completed with a passing grade and with specific documentation of necessity.     |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Grades will be on this scale (no final rounding up, 69 IS 69 and not 70) | | | | | | | | | | | 100 – 90 | **A (4.0)** | 80-89 | **B**  **(3.0)** | 70-79 | **C**  **(2.0)** | 60-69 | **D**  **(1.0)** | 0-59 | **F**  **(0.0)** | |

**Technology Requirements**

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| **User Agreement and Policies** | Usage of any USF computer system is conditional to the acceptance of the following policies;  <http://www.usf.edu/it/class-prep/acceptable-use.aspx>  Your first access to the systems used in this course will constitute an implicit acceptation of the terms of these agreements. |

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| **Generic Computing Needs** | Availability and use of generic application software, word processing, database, spreadsheet, presentation; i.e. Microsoft Office package.  A computer and operating system (i.e. Windows 7) capable to run the software required by this course. You are responsible for ensuring that your hardware and software are fully operational during the first week of the course. Further documentation on these requirements will be available from Canvas during the 1st week of the offering. |

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| **Internet Access** | Fast and reliable access to the Internet (World Wide Web) is required. Use of Firefox or Microsoft Internet Explorer browsers is mandatory for compatibility with the Canvas system, which is provided by the University of South Florida and is the courseware package to be utilized in this course. Visit <http://apps.usf.edu/> for further specifications, downloads and plug-ins (<http://proxy.usf.edu:81/plug-ins.html>). |

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| **Email** | Every enrolled USF student receives an official USF e-mail account that ends with "mail.usf.edu."  Every official USF correspondence to students is sent to that account. Students should go to the Academic Computing website (<http://www.usf.edu/it/>) for detailed information. Information about the USF Web Portal can be found at: <http://apps.usf.edu/>.    All course correspondence will be routed through your USF e-mail account specified by your Net ID, unless you forward it to another location. |

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| **Canvas** | This course is a web-based course. An overview is offered at the beginning of the semester to introduce and orient the student to both the courseware and content to be utilized in the course. The Canvas courseware package is being used as a vehicle for virtual classroom space. To access your "My USF" page go to the following link: <https://my.usf.edu> Enter your net id and password to gain access to the secure site. You can complete a browser check by clicking on the test browser option on the left hand side of the Canvas "Welcome" page.    Click on courses and find the link into this course. After the initial class, you will be expected to log-on and participate to online activities as well.    There are a series of steps that must be completed in order to gain access to the course through the USF servers. You must:   1. Have your USF student identification card. 2. Complete the USF Net ID Process 3. Log on to <https://my.usf.edu>   For detailed instructions and links to complete this process visit  <http://www.usf.edu/it/services/netid.aspx> |

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| **Collaborate** | Synchronous communication tools (Collaborate) will be utilized during the semester.  To access these tools you will need to go to the following link: <http://www.usf.edu/atle/technology/blackboard-collaborate.aspx>  To log in for the first session an email with instructions will be sent to you, You will need to type a username and password. Information about this username and password will be in the email that you receive as well as the links for accessing our virtual classroom.  You will also need a computer headset with a microphone to optimally utilize this software and participate in the online dialogue.    Collaborate Participant Training and documentation- <http://www.usf.edu/atle/technology/blackboard-collaborate.aspx> |

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| **Technical Issues** |   This is an online offering, we are using technology. Technology is never 100% reliable. Do not wait the last minute to submit an assignment. Make sure you schedule your work to be able to recover from last minute technical difficulties. Failing to do so puts the responsibility in your camp, not the instructor’s, not the Canvas team’s, not the “internet”.    Make sure you verify the contents of the files you’re about to upload for an assignment BEFORE to upload them.    Make sure that you attach the files on the Canvas form before to submit. Yes, you need to select a file then click a button to attach it, then only submit it. This changed in Canvas 9.    If  you encounter a technical problem which cannot be documented, e.g.  o    ISP “phantom” outage  o    Mysterious PC failure at home  o    Lost emails  o    “I submitted it in Canvas but you didn’t get it”  o    …  You will not be granted extra delays to resubmit. It is recommended that you submit early and carefully. Emails should be used only for personal inquiries and you should follow up if you do not get a response within 24-48 hours. Backup your files at home and do not wait to take an online exam during a big storm. |

**Getting Started with the Necessary Software**

The following information will help you set up software you will be required to use during the course of the semester. Make sure you work your way through these instruction as soon as possible (i.e. during the first week of class). Contact your instructor, TA, and academic computing immediately if you encounter problems. It is advised to do so through a post on the appropriate Canvas forum in the “discussion forums” section of the Canvas site.

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| **Use Canvas visual editor** | Canvas  allows you to edit any text you post to forums and as responses to online exams in two modes. The most basic on only allows you to enter plain text and do not allow you to maintain proper indentation when typing source. The second is a "what you see is what you get" editor which features an icon bar over the text input area. Always make sure to turn on the WYSIWYG version, also known as “Visual Editor”, and to submit posts and exam responses which are properly indented. Failure to do so might result in loss of points after the first week. |

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| **USF Computer Systems License Agreement** | You are bound by the terms of the USF user agreement when using software or servers. Please make sure you understand that these computing resources are made available to you only for specific educational purposes related to this course. If unsure about whether you are allowed to use these resources in a specific way or not, email your instructor before to proceed. Ignorance of what constitutes proper usage of USF computing resources will not be taken into consideration if legal, administrative or academic charges are to be pressed against you for their inappropriate or illegal usage |

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| **Taking exams on Canvas** | In the exam section of the course's Canvas site you will find a sandbox exam. This exam is not graded but will allow you to get used to using Canvas to respond to various kinds of questions. Similar tools will be used when you will take your online exams.  In addition to the Canvas tools, the software we are using this semester will also be used to submit programs. Information on how to do so will be provided in due time by your instructor. It is particularly important that you get familiar with how to upload programs that you wrote on your computer, using the course’s programming environment, as a response to an exam question. Make sure you get familiar with this procedure during the first weeks of the course. Coming to an exam unprepared might result in you wasting time performing improper upload procedures or even be unable to complete the assignments. Last minute technical issues due to a lack of preparedness won’t constitute a valid excuse. |

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| **Virtual Machine** | To learn Linux without requiring you to install it on your windows machine, we will be using a virtual machine software which will allow you to run a fully-fledged virtual Linux system as simply as you would run an application. Make sure you download, install and test all the necessary software during the 1st week. Make sure you understand that this specific software requires you to be connected to the internet in order to be able to compile your programs. |

**USF Policies**

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| **Intellectual Property** | Taping lectures or classroom discussions is not permitted.    The materials on this course website are only for the use of students enrolled in this course for purposes associated with this course and may not be retained or further disseminated. The materials on this course website may be protected by copyright; any further use of this material may be in violation of federal copyright law. |

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| **Disability** | Academic Support and Accommodations for Students with Disabilities: Students with disabilities are responsible for registering with the Office of Student Disabilities Services in order to receive special accommodations and services. Please notify the instructor during the first week of classes if a reasonable accommodation for a disability is needed for the course. A memorandum of accommodations from the USF Disability Services Office must accompany or follow this request during the first two weeks of the course. Verbal requests for accommodations are not authorized by the Academic Support and Accommodations for Students with Disabilities policy. A written memorandum of accommodation is required. On the USF Lakeland Campus contact Ms. Mary Mittag, Disability Services Liaison, 863-667-7063. The USF Office number is 813-974-4309. |

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| **Religious Observance** | USF Policy on Religious Observances:  Students who anticipate the necessity of being absent from class due to the observation of a major religious observance must provide notice of the date(s) to the instructor, in writing, by the second class meeting |

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| **Academic Dishonesty** | **Academic Dishonesty:**  Plagiarism is defined as "literary theft" and consists of the unattributed quotation of the exact words of a published text, or the unattributed borrowing of original ideas by paraphrase from a published text. On written papers for which the student employs information gathered from books, articles or oral sources, each direct quotation, as well as ideas and facts that are not generally known to the public at large, must be attributed to its author by means of the appropriate citation procedure. Citations may be made in footnotes or within the body of the text. Plagiarism also consists of passing off as one's own, segments or the total of another person's work. |
|  | **Punishment for academic dishonesty** will depend on the seriousness of the offense and may include receipt of an "F" with a numerical value of zero on the item submitted, and the "F" shall be used to determine the final course grade. It is the option of the instructor to assign the student a grade of F or FF (the latter indicating academic dishonesty) in the course. |
|  | **Detection of Plagiarism**  The University of South Florida has an account with an automated plagiarism detection service (SafeAssignment.com) which allows instructors to submit student assignments to be checked for plagiarism.  I reserve the right to 1) request that assignments be submitted to me as electronic files and 2) electronically submit assignments to SafeAssignment.com, or 3) ask students to submit their assignments to SafeAssignment.com through myUSF. Assignments are compared automatically with a database of journal articles, web articles and previously submitted papers. The instructor receives a report showing exactly how a student's paper was plagiarized.  For more information about Safe Assignment and plagiarism, go to http://www.c21te.usf.edu and click on Plagiarism Resources. More information about plagiarism can be found in the USF Undergraduate and Graduate catalogs. |

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| **Grade Dispute / Grievance** | The student must first make a reasonable effort to resolve his or her grade dispute or grievance with the instructor concerned, with the date of the incident triggering the dispute/grievance clearly identified (i.e., the issuance of a grade; the receipt of an assignment). The instructor will accommodate a reasonable request to discuss the grade or incident in question and will attempt to resolve the issue.    If the situation cannot be resolved or the instructor does not respond to the student’s attempts to contact the instructor, the student will file a notification letter within three weeks of the triggering incident to the USF Lakeland Division Director. This should be a concise written statement of particulars and must include information pertaining to how, in the student’s opinion, University policies or procedures were violated. The USF Lakeland Division Director will provide a copy of this statement to the instructor, to the USF Lakeland Campus Associate Dean and to the USF Tampa Department Chair. Grade disputes or issues that have not been identified by the student within 21 days of the triggering incident will not be considered.    If the situation cannot be resolved at the Division level, the USF Lakeland Campus Associate Dean will guide the student through the College-level process. Additional information on the academic grievance process can be found in the Undergraduate and Graduate Catalogs. |

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| **Academic continuity in the event of prolonged campus closure** | In the event of an emergency, it may be necessary for USF to suspend normal operations.  During this time, USF may opt to continue delivery of instruction through methods that include but are not limited to: Canvas, Collaborate, Skype, and email messaging and/or an alternate schedule. It’s the responsibility of the student to monitor Canvas site for each class for course specific communication, and the main USF, College, and department websites, emails, and MoBull messages for important general information. |

**Additional Course-Specific Policies**

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| **Additional Policies on Academic Honesty** | * You are expected to be honest and not cheat on papers / quizzes / assignments / examinations. Each student must work independently on all papers, quizzes, assignments and examinations. * You are expected to read the University's policies on student conduct, academic dishonesty, etc. Please see the University's Undergraduate Catalog regarding these policies at<http://www.ugs.usf.edu/catalogs/0506/adadap.htm> as well as the Procedures for Alleged Academic Dishonesty or Disruption <http://www.ugs.usf.edu/catalogs/0506/adadap.htm> and the student Academic Grievance Procedures - <http://www.ugs.usf.edu/catalogs/0506/arcsagp.htm> * Any form of cheating or plagiarism will be sanctioned by a 'FF' grade for all party involved. * Each graded assignment is required to be personal work only. Using material authored by others (e.g. found on the web, previous students, knowledgeable friends…) or seeking other peoples’ advices besides the instructor or TA is considered cheating. Any question about assignments can be only asked to your instructor or TA. * Being unable to explain any aspect of the material you submitted to be graded as your own work will be considered the result of cheating and will be sanctioned the same way. * The instructor reserves every right to use any possible mean to assert if a given student cheated or not. This may include, but is not limited to, (automatic) comparisons to other sources, questioning student(s), etc. |

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| **Important**  **Remarks** | * Check the course’s Canvas site for updates on a daily basis. * Notify any disagreement on this syllabus in writing by the end of the 1st week. Staying registered beyond this deadline is an implicit acceptance of the terms of this syllabus. * The following are not allowed to be used without written consent of the instructor: class notes, slides,  forums posts, emails, announcements, hand-outs, videos, any type of recording of class sessions * Please make sure that you turn off your cellular phone during scheduled class meetings (online or face-to-face) and do not use your computer for non-course related purposes when engaged in Collaborate sessions. |

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| **Grading Criteria and/or Scale** |   No late assignments will be accepted. You are responsible for attempting your submissions ahead of time enough to allow you to seek help should a technical issue occur.    Make up quizzes/exams will be given for documented emergencies only.   * Serious situations will be considered as exceptions to the above only with justifications (e.g. police, medical reports, etc). Justifications will be investigated to ensure of their validity.     No pre-grading nor proof-reading of your work before it is submitted    No extra points to be expected. Grades are not given on “face value” basis.    Extra credit assignments are optional and their availability not guaranteed.    If there is a conflict with my final examination and another course exam you have, please let me know as soon as possible so that we can schedule a make-up exam for you.    Be sure to inquire about what is exactly required in each exam / assignment if the information is not made available in writing before the deadline |

 Please do not hesitate to contact me, if you find errors or have questions with regards to this syllabus.   [matthewm1@mail.usf.edu](mailto:matthewm1@mail.usf.edu)