CIS4930 -Linux Command Line Interface

Fall 2022 Syllabus

Prime Directive

Anything not explicitly allowed by the instructor in writing (announcement, Canvas message, forum post, syllabus, or slides) is implicitly forbidden.

1. Instructor Information

Name Alessio Gaspar

Website http://cereal.forest.usf.edu/alessio

Canvas Messages In order to ensure a prompt response to your queries of a **personal nature**

(grades, feedback on graded assignments, personal situations), make sure to **only use Canvas messages** (not emails or phone) to contact your instructor

and teaching assistants.

If you don't hear back from us within 48 business hours, please re-send your Canvas message or mention the issue using the Piazza tool available in our

course's Canvas page.

Piazza For any query related to the readings, lectures, or non-graded assignments,

please use instead Piazza to post your questions.

Piazza is accessible via a link in the left panel on the course's Canvas site. The

system is highly catered to getting you help fast and efficiently from classmates, the TA, and myself. Rather than messaging the teaching staff, I encourage you to post your questions on Piazza. If you have any problems or

feedback for the developers, email <u>team@piazza.com</u>.

Address ENB343E

Department of Computer Science & Engineering University of South Florida, 4202 Fowler Avenue

Tampa, FL, 33620-9951

Phone 813 974-2932

The best way to get in touch with me reliably and fast is via Piazza or

Canvas Messages.

Instructor's Office Hours

- These will be held on campus.

 The office hours are walk-in and we work on problems encountered by all students in the room in parallel.

 If you want a private one-on-one meeting, contact me first by Canvas message to make an appointment.

- The days and times for office hours are posted in the "syllabus"

section of our course's Canvas site.

Teaching Assistants Office Hours

These will be held on campus.

- The office hours are walk-in and we work on problems encountered by all students in the room in parallel.

- These sessions are an opportunity for you to work on the practice

- exercises with help from our TAs or ask them for more details on any feedback they left on one of your grades
- The exact days and times during our TAs are available, along with their contact information, will be announced by your instructor during the first week of classes

2. Course Information

Prefix CIS
Number 4930
Section 011
College EN
Department ESB
CRN 90337

Title Linux Command Line Interface

Course Meeting Mondays & Wednesdays **Times & Location** 2pm – 3:15pm, in ENB118

Required Textbook No required textbook for this course. Students will be provided with links to

freely available material and instructor-authored material.

Pre-requisites Knowledge of programming in any language

Description Introduction to a modern Linux distribution; installation in a desktop-friendly

virtualized environment, users and software packages management, usage of

the shell for navigation, and text processing command line tools.

Course Objectives & Learning Outcomes

On successful completion of this course, you will be able to;

- 1) use a modern Linux distribution in a virtualized environment
- 2) find helpful information about Linux tools
- manage user accounts using both Graphical User Interface and Command Line Interface tools
- 4) manage software installation using both GUI and CLI tools
- 5) use the shell to navigate the file system and manipulate processes
- 6) use CLI tools to process data in text files
- 7) use regular expression to filter data in text files with CLI tools

Availability of Course Material, announcements and assignments

- This course should be listed when you login to Canvas.
- We will use the Canvas site to communicate via Piazza, via Canvas messages, to submit assignments or exams, take quizzes...
- The details on the specific activities for which we will be using Canvas will be provided to you by your instructor during the semester.

Tentative Schedule The following tentative timeline might be modified during the semester.

Week #	Module #	MONDAYS Lecture	WEDNESDAYS Hands-on PA or Exam	Graded Quizzes
1	M01	Course Overview Basic Usage	Laptop Setup Help session	Special
2	M02	Serious CLI	PA-02	GQ-01
3	M03	Basic SysAdmin	PA-03	GQ-02
4		Q&A session	IE #1	GQ-03
5	M04	Managing Packages	PA-04	n/a
6	M05	File System	PA-05	GQ-04
7	M06	The UNIX way	PA-06	GQ-05
8		Q&A session	IE #2	GQ-06
9	M07	Regular Expressions	PA-07	n/a
10	M08	Bash Scripting 1	PA-08a	GQ-07
11	M09	Bash Scripting 2	PA-08b	n/a
12		Q&A session	IE #3	GQ-08
13		Case Studies	Case Studies	n/a
14		Case Studies	Case Studies	n/a
15	M10	Adv Topics	Review Q&A	n/a
16		Final Exam		n/a

Week# Week's number in the semester. Please note that we skip spring break week. Legend

> GQ **Graded Quiz** ΙE **Intermediary Exams** PA **Practice Assignment**

3. Assessment of Student Outcomes

Grading Criteria Grades will be on this scale and/or Scale:

(no final rounding up, 69 IS 69 and not 70)

100-90 Α 4.0 80-89 В 3.0 70-79 C 2.0 D 60-69 1.0

Evaluation Items

Item	Weight % of final grade	
Graded Quizzes (GQ)	10%	
Intermediary Exams (IE)	45%	
Case Study	10%	
Final Exam	35%	
Total Points Available	100%	

With anything that is graded in this course, any questions may only be addressed to your instructor by Canvas message, or when meeting with him online.

- All material you submit for a grade will be assumed to be personal work only. If it is not, you will be penalized for cheating. See academic honesty policies for details.

GQ Graded Quizzes

- They will be administrated online using Canvas and will allow students to evaluate their basic understanding of the study material.
- You are allowed to take the quiz a single time and need to complete it in one shot during the allotted time.
- While you take the quiz, you will be proctored see details below.
- You are NOT allowed to use anything but your textbook (digital or print editions) while taking graded quizzes (e.g. no browsing on the web, no use of the Java Programming environment we are using to write code in this course...)
- If you experience a technical difficulty, send a Canvas message your instructor immediately with documentation of the problem you encountered. Under specific documented situations your attempt will be cleared and you will be allowed to retake the quiz. However, you need to understand that this is exceptional and only for situations which may be documented.
 - The instructor is not required to grant you another attempt because you clicked on the wrong button.
 - It is your responsibility to have a fast and reliable internet connection when enrolling in an offering which relies on the internet to provide you with material, communication and assess your performance.
- Such extra attempts might be granted only if you sent via Canvas message verifiable documentation on what happened right when the problem happened.
- Such extra attempts won't be granted as extension to the deadline.
 E.g. if you take the quiz 3 hours before the deadline, bump into a problem, send a Canvas message to your instructor, get a response 2 hours later, then you have only 1-hour left
- Such requests will be processed as time permit. Sending a Canvas message at 9pm the day of the deadline will most likely result in a response the next day, too late to grant another attempt.

IE Intermediary Exams

We will have regular Intermediary Exams. Each of them will be open notes, time-limited, and proctored.

Case Study

During the semester, opportunity for topics to explore further will be pointed out to students. These will be available for "case studies" that will represent independent investigations by students resulting in a presentation to the whole class during the last sessions of the semester.

Many topics will cover alternative technologies, thus allowing students to leverage what they learned in the course while supplementing it with a bit of research to allow them to compare it to a similar but different technology. Example:

- We study the Debian family of package management tools

Students may explore Red Hat family or even alternatives to software packages altogether such as flatpack, snap, and Applmage.

Final Exam

- All final exams are to be scheduled in accordance with the University's final examination policy.
- Please note that the day and time might differ from those of our regular class meetings.
- The Final Exam will be on campus and will also be proctored.
- The work you submit to be graded must be only the result of your personal work.
- You will only be allowed to use your textbook, along with the software we used during the course to develop Java programs.

Software

All students must review the syllabus and the requirements, including the online terms and video testing requirements, to determine if they wish to remain in the course. Enrollment in the course is an agreement to abide by and accept all terms. Any student may elect to drop or withdraw from this course before the end of the drop/add period.

Online exams and quizzes within this course may require online proctoring. Therefore, students will be required to have a webcam (USB or internal) with a microphone when taking an exam or quiz. Students understand that this remote recording device is purchased and controlled by the student and that recordings from any private residence must be done with the permission of any person residing in the residence.

To avoid any concerns in this regard, students should select private spaces for the testing. The University library and other academic sites at the University offer secure private settings for recordings and students with concerns may discuss location of an appropriate space for the recordings with their instructor or advisor.

Students must ensure that any recordings do not invade any third-party privacy rights and accept all responsibility and liability for violations of any third-party privacy concerns.

Students are strictly responsible for ensuring that they take all exams using a reliable computer and high-speed internet connection. Setup information will be provided prior to taking the proctored exam. To use Honorlock students are required to download and install the Honorlock Google Chrome <u>extension</u> (https://static.honorlock.com/install/extension)." For additional information please visit the https://www.usf.edu/innovativeeducation/digital-learning/digital-learning-resources/proctorio-studentfag.aspx) and Honorlock student resources (https://honorlock.com/students/).

Additional notes:

- Be ready to show to your webcam a valid ID; i.e. either driver license or USF Student ID
- Access Canvas using the Google Chrome web browser which is guaranteed to be compatible with the online proctoring plugin that you will have to install

Online Proctoring

- Work on a single monitor while you take the exam; disconnect any secondary monitor. Use a single computing device while taking the test: the one being proctored.
- Do not communicate with anyone, physically or online, while taking the exam. Sound, video, network traffic and screen activities will be monitored in order to flag any suspicious behavior

Do not use any web resource besides the one explicitly authorized in writing by your instructor, or use any search engine or similar technology

4. USF Policies

While advisors, directors, department chairs and administration are available to assist students in meeting academic regulations, policies and procedures, it is ultimately the student's responsibility to be acquainted with all academic regulations, policies and procedures, and to meet all requirements.

Policies about disability access, religious observances, academic grievances, academic misconduct, and several other topics are governed by a central set of policies that apply to all classes at USF. These may be accessed at: https://www.usf.edu/provost/faculty/core-syllabus-policy-statements.aspx [The link shown is that which accesses the referenced site.]

We provide, in the remainder of this section, additional notes supplementing the above resources. The other sections of this syllabus also supplement these resources with additional instructor- and course-specifics policies.

Student Code of Conduct

The University of South Florida values a community based on the principles of integrity, civility, and respect. As such, the USFP community expects students to behave in a manner that supports these principles. The Student Code of Conduct is a document which describes behavior that is counteractive to these principles and how the university will hold students accountable to those inappropriate behaviors.

Incomplete Grade (I)

The current university policy concerning incomplete grades will be followed in this course.

For undergraduate courses: An "I" grade may be awarded to a student only when a small portion of the student's work is incomplete and only when the student is otherwise earning a passing grade. The time limit for removing the "I" is to be set by the instructor of the course. For undergraduate students, this time limit may not exceed two academic semesters, whether or not the student is in residence, and/or graduation, whichever comes first. For graduate students, this time limit may not exceed one academic semester. "I" grades not removed by the end of the time limit will be changed to "IF" or "IU," whichever is appropriate.

For graduate courses: An Incomplete grade ("I") is exceptional and granted at the instructor's discretion only when students are unable to complete course requirements due to illness or other circumstances beyond their control. The course instructor and student must complete and sign the "I" Grade Contract Form that describes the work to be completed, the date it is due, and the grade the student would earn factoring in a zero for all incomplete assignments. The due date can be negotiated and extended by student/instructor as long as it does not exceed two semesters for undergraduate courses and one semester for graduate courses from the original date grades were due for that course. An "I" grade not cleared within the two semesters for undergraduate courses and one semester for graduate courses (including summer semester) will revert to the grade noted on the contract.

5. Covid-19 Procedures

All students must comply with university policies and posted signs regarding COVID-19 mitigation measures, including wearing face coverings and maintaining social distancing. Failure to do so may result in dismissal from class, referral to the Student Conduct Office, and possible removal from campus.

Additional details are available on the University's Core Syllabus Policy Statements page: https://www.usf.edu/provost/faculty/core-syllabus-policy-statements.aspx

6. Validation of Medical Excuses

Please note that the procedure for documenting medical excuses has changed. The faculty no longer review doctors' notes or other medical documentation. Instead, you must contact USF Student Health Services and have them review your documentation in order to issue a verification of care letter that you will then submit to your faculty. Details below;

Students should not attend class if they are ill, particularly if they have fever and/or gastrointestinal symptoms and/or respiratory symptoms such as a sneezing, runny nose, sore throat or coughing. Students experiencing any of these symptoms should contact immediately the Student Health Services (813-974-2331) on the Sarasota-Mantatee and Tampa campus or the Wellness Center (727-873-4422) on the St. Petersburg campus for appropriate medical guidance and to obtain a verification of care letter. Students may turn to other health providers as well. To be approved for missed classes, late assignments or missed examinations a verification of care letter must be presented by the student to the faculty member upon return to class.

7. Additional Course-Specific First Day Attendance Policy

First Day Attendance

First day attendance will be taken using a First Week Quiz. The latter will be available on the Canvas site for this offering until the Friday of the first week at 1pm. By then, you will have to have not only taken it to completion, but also achieved 100% of the available points for this quiz. Failure to do so will result in you being marked "absent" on the first day attendance Canvas tool.

Important remarks:

- The quiz only features questions which are meant to allow you to certify that you complied with all requirements for the first week.
 Therefore, achieving 100% score is easy if you work early in the week.
- You are able to take this quiz multiple times, unlike the other graded quizzes we will be using this semester. So you might take it, learn from your mistakes; take it again until you score the required 100% on it.
 Make sure you do this before the deadline
- You may verify whether you got this quiz right by looking at its gradebook entry and make sure you got all the available points

If you decide to drop from the offering, you still need to work with the registrar on ensuring you are properly dropped. Simply not taking the quiz or scoring less than 100% of the available points does not wave other required procedures for you to drop.

8. Additional Course-specific Technology Requirements

Ground Rules

The following are not suggestions but requirements which you need to meet by the time you certify meeting them in our first week quiz.

- Failure to meeting the requirements, or certifying that you meet them in the first week quiz, will result in you being marked as "absent" for first day attendance purposes
- If at any point during the semester, the instructor establishes that you failed to meet these requirements and did not disclose it or drop the course, you will be asked to drop the course without further support.
- You are responsible to ensure you meet all these requirements see technical support below for available resources

Technical Support

If you encounter technology-related problems, immediately contact the USF IT helpdesk by browsing to https://itchat.usf.edu/. Alternatively, you may open a ticket by emailing help@usf.edu but the above is generally a faster way to obtain support.

Laptop Requirements

You must own a laptop to work in this course;

- It must allow you to access the USF Tampa Campus wireless network
- It must have a battery capacity allowing you to take a two hours long exam on campus without having to plug in
- It must run a recent version of Windows and the complete Microsoft suite of office software.
- It must allow you to run efficiently the course software that you will be required to install and test during the first week; refer to instructor announcements and other material made available to you during the first week.
- In order to be able to take online proctored examinations, you will also need a webcam and microphone
- In order to be able to engage in online live sessions, you will also be required to use a microphone and headset

Internet Access

In order to participate, you need the following;

- Reliable internet connection preventing you from being dropped during online activities, and receive zero points for them
- Fast internet connection allowing you to meet your instructor or other students using Blackboard Collaborate
- Internet browser and plugins necessary to run Blackboard Collaborate, Canvas, and other software used in this online course

Software Requirements

This course will be using specific software tailored to the needs of this offering

- Details on where to download the software and how to install it will be provided during the first week
- Usage of this specific software in the course is mandatory for all course activities. A grade of 0 will be assigned to any submission developed using another environment
- You must ensure that your software is working properly by the end of the first week or drop this offering

 The instructor is not responsible for adapting the software to the specifics of your personal computer. Requests to do so will be ignored and won't constitute a substitute to the above

USF NetID

 You must have a USF Student ID in order to sign up for your USF NetID that is required for access to the Learning Management System.

USF Email

E-mail: Every enrolled USF student receives an official USF e-mail
account that ends with "@usf.edu." Every official USF correspondence
to students is sent to that account. Students should go to the USF
Information Technology website for "New User" information at
http://www.it.usf.edu

Technical Issues

Technology is not 100% reliable. Do not wait the last minute to submit and take assignments. 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 LMS 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 know how to submit assignment via the LMS before to take this offering.
- You will not be granted extra delays to resubmit if you encounter a technical problem which cannot be documented, e.g.
 - ISP "phantom" outage / Mysterious PC failure / Lost emails
 - o "I submitted it in blackboard but you didn't get it"
 - 0.

It is therefore 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 business hours. Backup your files at home and do not wait to take an online exam during unfavorable weather.

- Students are expected to already know how to use the Learning
 Management System deployed at USF before to enroll in this offering.
- If you are unsure as to what this entails, contact immediately the USF help desk at help@usf.edu to receive training.
- Last minute technical issues due to a lack of preparedness won't constitute a valid excuse.

9. Additional Instructor-Specific Policies

Instructor's Right to Modify the Course Syllabus.

As the instructor of record for this course, I reserve the right to modify the course syllabus at any time during the semester to address changes needed in content, course resources, assignments, due dates, etc.

Expectations in students'

- Use your USF official email address to send emails and make sure you refer the offering you are enrolled in along with the context of your

Canvas

communications

- question; e.g. "I am taking COP3515 IT Program Design and I have problems with quiz 302-Q, question #4". Emails which fail to provide this information might take much longer before they are processed
- Be polite and respectful to your interlocutor at all times, regardless of their rank; e.g. student, TA, tutor, instructor...
- Insults, sarcasm, excessive punctuation marks or other violations of netiquette will not be tolerated. Students sending such emails will be subject to USF policies on Academic Disruption.
- At the very minimum, the student will be added to the instructor's email spam filter and remove from the course's Canvas site thus preventing him or her from further disrupting the teaching process.

Netiquette

General Communication Guidelines

- 1. Act professionally in the way you communicate. Treat your instructors and peers with respect, the same way you would do in a face-to-face environment. Respect other people's ideas and be constructive when explaining your views about points you may not agree with.
- 2. Be sensitive. Be respectful and sensitive when sharing your ideas and opinions. There will be people in your class with different linguistic backgrounds, political and religious beliefs or other general differences.
- 3. Proofread and check spelling. Doing this before sending an email or posting a thread on a discussion board will allow you to make sure your message is clear and thoughtful. Avoid the use of all capital letters, it can be perceived as if you are shouting, and it is more difficult to read.
- 4. Keep your communications focused and stay on topic. Complete your ideas before changing the subject. By keeping the message on focus you allow the readers to easily get your idea or answers they are looking for.
- 5. Be clear with your message. Avoid using humor or sarcasm. Since people can't see your expressions or hear your tone of voice, meaning can be misinterpreted.

Academic **Dishonesty**

- You are expected to work independently on all graded activities. Every graded work 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 is considered cheating.
- Any question about graded assignments or exams can be only asked to your instructor or the teaching assistants.
- Any form of cheating or plagiarism will be sanctioned by a 'FF' grade for all party involved.
- 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.

Grading, 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.
- No credit nor make-up for missed exams, quizzes or assignments
- Serious situations will be considered as exceptions to the above only with justifications (e.g. police, medical reports, etc) which will be investigated.
- There will be no "pre-grading" nor "proof-reading" of work you are expected to submit later as part of a graded learning activity. You will have opportunities to get feedback on practice assignments.
- 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.

Grades Errors

Errors in grading are considered errors when the students is able to provide irrefutable evidence that his or her solution is [1] working and [2] in line with the requirements.

- Subjective considerations will not be taken into consideration nor will errors from the student in interpreting the requirements. Being able to interpret instructions correctly is an ability which is also measured as part of a learner or an IT Professional's evaluation.
- Errors in grading must be reported in detail to the instructor, by email within 48 hours. However, the instructor's subsequent decision on the matter will be final. Further communications on that issue will be ignored. Grading is *not* a negotiation, any more than your future boss' judgment of your work's quality is.

Gradebook Usage

- Students are expected to monitor their gradebook daily.
- Students are expected to read the feedback on every grade as they are released. Questions should be emailed to your instructor only within 48 hours of the grades release.

Other

- Staying registered beyond the first week implies acceptance of this syllabus' terms.
- Anything not explicitly authorized in writing by the instructor, i.e. syllabus / announcements / emails / instructions, is considered disruptive or unethical behavior from students. If in doubt, you are expected to email your instructor to verify the appropriateness of a given behavior prior to engage in it.
- If a given communication from your instructor contradicts another, it is your responsibility to email your instructor to verify which policy is appropriate.
- 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 live online sessions.
- Any recording, and distribution thereof, of lectures or communications with TAs and instructor is prohibited.

Engage in Learning

- Make sure you use the gradebook to review your grades and feedback on the various items every week so you may monitor your progress.
- Check the course's sites for updates or announcements on a daily basis.
- Do not simply "do the minimum". A learning activity might not be graded, e.g. posting on Piazza to ask / answer questions, but yet it may be essential to your academic experience.
- Depriving yourself of such opportunity has generally a very negative impact on the quality of the skills you develop during your degree.
- A 3 credit course at USF generally require students to devote 12 hours of work every week during spring and fall semesters.
- During summer semesters, which are 10 weeks only but need to cover the same material than our 16 week long semesters, this number of hours proportionally rises to about 20.
- Do not wait for the last minute to work on your assignments. The most effective way to work is to have multiple work sessions over the week.
- This allows you to have time to ask questions, and get responses, before deadlines. If you do not give yourself the time to work like so, you might implicitly forfeit any opportunity to actually get help.

Get Help Early & Often

- As a student, it is your responsibility to work on both graded and nongraded assignments / quizzes / exercises regularly with the intent to develop your understanding of the material being taught.
- However, you should also seize opportunities to get help with this task.
 This offering has many such opportunities readily available to support your learning; meeting with the instructor, using piazza to ask questions, working on non-graded practice assignments with other students...
- Establish, early in the semester, a regular dialog with your instructor and teaching assistants. I am always happy to discuss your experience in the course. Do not hesitate to reach out to me regarding any problems you might have; e.g. technology, learning activities, difficulties with the material, questions about the BSIT program, how to make the most out of your study time...