



IT 4336 – Network Security
Spring 2024 – Mon/Weds 11:15 – 12:30, Synchronous in Statesboro & Armstrong
Statesboro: IT 2207; Armstrong Gamble 201
Prof. Frank Katz

Course Description:

This course offers an introduction to firewalls and virtual private networks (VPNs) for securing a network. Various network security-related issues are introduced and examined. Different types of firewalls for securing data in an organization are discussed, as well as how to construct, configure, and administer a firewall and the functionality of a firewall. Other firewall topics include the utility of firewalls in tackling security problems and the limitations of a firewall. Different types of VPNs for securing data in an organizational setup are discussed as well as the benefits and architecture of a VPN and how to implement a VPN.

Cybersecurity Program Objectives:

1. Analyze a complex Cybersecurity problem and apply the principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate both computing-based and non-computing-based solutions to meet a given set of Cybersecurity requirements in the context of the program's disciplines.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgements in the practice of Cybersecurity based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Identify and analyze user needs and take them into account in the selection, creation, integration, evaluation, and administration of computing-based and non-computing-based Cybersecurity systems.

Course Outcomes:

Upon successful completion of this course, you will be able to describe and/or define:

1. Explain the fundamental concepts of network security.
2. Recognize the impact that malicious exploits and attacks have on network security.
3. Describe common network topologies and system infrastructures and implement them into a secure network design.
4. Describe the fundamental functions performed by firewalls, common firewall technologies, and the elements of firewall implementation and configuration.
5. Follow the implementation of a firewall.
6. Learn how to construct firewall rules.
7. Describe the fundamental functions of virtual private networks (VPNs), common VPN technologies, and the elements of VPN implementation and management.
8. Follow the implementation of a VPN.
9. Identify firewall and network security management best practices.



10. Evaluate regulations and emerging network security technologies.

Administrative Information:

Professor Asst. Prof. Frank H. Katz
 Office/Phone Armstrong, SC 210 / 344-3192 (or 4-3192 on either campus)
 E-mail fkatz@georgiasouthern.edu However, to consolidate emails, I insist that you email me via **Folio’s email function**. You should only contact me at my university email address *if necessary*. **Under no circumstances are assignments to be sent to my university email address – if sent there, they will not be accepted.**

Scheduled Office Hours T - Th 2:00 to 5:00. I am also available by appointment
 Personal Website <https://franktheitprof.000webhostapp.com/>
 Web page with cybersecurity links <https://franktheitprof.000webhostapp.com/katzinfosec.html>
 Prerequisite IT 3530 (current Cybersecurity I, Fundamentals of Information Systems Security)
 Required Text Network Security, Firewalls and VPNs, 3rd edition, J. Michael Stewart, Jones and Bartlett Learning. See table below for your buying options. **We are employing a “bundled” approach to our textbook and accompanying material (virtual lab) for this course.** The various options for purchasing the text (physical or e-book) and you access to the online lab (which you **must** have) are in the table below and on the **Courses** page of my personal website provided above.
 Please note that I do not post a text as required and then not use it – if I list it as required, you **must** have it.

Buying Option	Information
Physical print text / Lab Access "bundle" (either from ASU bookstore or Jones & Bartlett Learning)	978-1-284-18462-4
E-book / Lab Access "bundle" (either from ASU bookstore or Jones & Bartlett Learning)	978-1-284-18465-5
Just Virtual Lab Access *	978-1-284-18370-2

* ALL students in IT 4336 **MUST**, as a **minimum**, purchase the "Just Virtual Lab Access" option. This presumes you might have purchased your textbook used or new from a 3rd party seller, such as



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*Amazon. I will provide you with the **Jones & Bartlett Course Code**, which is different from the **Access Code** that you purchase with your text.*

Materials and Resources not listed above:

- A USB flash memory thumb drive (a drive as small as 1GB will suffice).
- You are expected to possess or have access to the latest version of MS Word and MS PowerPoint. It might also be beneficial to possess or have access to MS Excel. ***I will not accept documents completed in Open Office or Google Docs.***
- To draw computer network diagrams (for security-related work), you might benefit from possessing or having access to MS Visio, however, it is not required. Any such drawings done with Visio can be done in MS Word. MS Visio is available for free to our students from the Georgia Southern Microsoft Imagine site. **My personal recommendation for drawing network diagrams is the [free draw.io](https://www.draw.io) software.**
- **As stated below – participation in the National Cyber League is mandatory and incurs a \$35 fee, but this fee is NOT due at the beginning of the course.**

IMPORTANT DATES

Monday, January 8	First day of Class
Monday, January 15	MLK Jr Holiday – no classes
Monday, January 29 – March 22	Registration period for NCL. See the NCL document for more information and other dates
Thursday, February 29	<i>Likely date that the Mid-Term Test will be available</i>
Monday, March 4	Mid-term of the semester, last day to withdraw without a WF
Monday, March 11 – Friday, March 16	Spring Break
Friday, April 12	All final individual projects are due – no end/late date and no exceptions
Monday, April 29	Georgia Southern's last day of class
During Final Exam Week, exact date to be determined	Final Exam. The university's exam period begins on Tuesday, April 30 and ends on Saturday, May 4



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Grading:

The course will be graded based on a total of 1000 total points available:

ITEM	Nbr	Value in Points	Value out of 1000
Chapter Quizzes (Chs 3, 8, 12, & 15 do not have quizzes)	11	10	110
CSSIA Quizzes	4	Each varies	40
Jones and Bartlett Labs	8	40	320
National Cyber League – TOTAL (see breakdown in NCL document)	1		125
In-Class “Table-Top Exercises” (Ethics & other topics)	6 of 7	10	60
Firewall Rules Quiz in Chapter 8	1	10	10
Individual Project submitted in ONE part (includes project requirement quiz)	1	110	110
Mid-Term Exam	1	100	100
Final Exam (contains more material than the Mid-Term Exam)	1	125	125
Participation in NCL Individual Game Competition	Up to 20 points EC depending on your score in the competition		

Communication Policies:

For complete policies, see the section online. This section has to do with email.

Although I have provided you with my Georgia Southern email address, it is **REQUIRED** that students **email me through the Folio**. This will make it easier for me to find and reply to all emails, as they will be in one central location. In addition, students should expect the following:

- Emails sent during normal working hours (8 am to 5 pm) will be answered as promptly as possible.
- Emails sent after 7 pm (Sunday – Thursday nights, i.e., “weekdays”) may not be answered until the next morning.
- Emails sent on a weekend will be answered as soon as practicable, but there may be as much as a 24-hour lag between a student emailing the instructor, and the instructor responding. In some cases, students may not receive a response until the subsequent Monday morning.
- Replies to e-mails sent to my fkatz@georgiasouthern.edu address **will ONLY be answered via the Folio email system**.
- Should a student send me an email on an issue that I feel **affects the entire class**, or could be **of interest to the entire class**, I may send my response (in a **separate** email) to the **entire class**.
 - **The name of the student who originally emailed me will remain anonymous.**
 - Even if that student thinks he or she is being “singled out”, that person’s name will **never** be mentioned in my email to the entire class.



- Such an email may begin with “A fellow student asked me this . . .”, but again, it will **never** state **who** asked me the question.

Individual Lab and Assignment Information (applicable to all assignments):

- Individual homework assignments are clearly indicated as such. *You are expected to **do your own work on each of these assignments***. Collaboration with other students is not allowed, and if discovered, may result in a zero on the assignment for all students involved.
- All assignments are due on the date indicated in the specific assignment in Folio. Each Folio assignment has two dates: the **due date**, when the assignment is due, and an **end date**, which allows you to submit your assignment up to that end date. Late submissions will be subject to the penalties described below. Assignments submitted within the following time frames will be assessed the following penalties:

From the due deadline, until 24 hours later (1 st day late)	10% deduction
Between 24 and 48 hours late (one day late)	20% deduction
Assignments will not be accepted more than 48 hours after the due deadline	

- Quizzes (weekly, CSSIA, and lab) and Tests do not have the due date/end date schema described above. **All quizzes and tests are due on their due date/time.**
- The **individual project is due on its due date/time.**
- Your **participation in NCL competitions have absolute due dates that the professor cannot control. Your participation MUST meet these deadlines.**
- Depending on their proximity to the end of the semester, **assignments due at the end of the semester may not have an end date.**
- Georgia Southern University is in the Eastern Time Zone. Regardless of where *you* might be, all times listed are **EDT** or **EST**, and you must plan accordingly. Quiz, test, assignment and required discussion question due dates/times will **NOT** be changed to accommodate the time zone you are in.
- **All due times are 11:59 pm unless otherwise noted.** This applies to all assignments, quizzes, and tests, as well as any other submissions. **Exception: unless stated otherwise, weekly chapter quizzes and CSSIA quizzes will open right after class on Monday at 12:30 pm and will close on the following Monday before class at 11 am.**
- Assignments submitted in a method other than described will not be graded. *You are generally given one to two weeks to complete an assignment. Note that submitting homework electronically means **getting your work done early**. You should plan for computer or network errors.*
- Submitting a **corrupted file**, i.e., a file that cannot be opened by me, for an assignment, **will result in a zero** for that assignment. Be sure that you do **NOT** submit a **shortcut** to a file, i.e., that you submit the file itself. Be sure that the file you submit **will** indeed open before



submitting it. **Students will NOT be given extra time to complete an assignment if I cannot open it.**

- *Written* assignments **MUST be written in MS Word**. Assignments submitted in any other format, for example, Apple’s proprietary word processor, will not be accepted.
- There may be times when two assignments are open at the same time (i.e., the “grace period” for one may overlap the start of another – I will try to keep this to a minimum number of occurrences). **It is YOUR responsibility to ensure that you submit your file to the correct assignment. Submitting a file to the wrong assignment will result in that file NOT being graded.**
- **Submitting an “empty” file will result in a zero. You will NOT be allowed to resubmit the file for a grade.** For example, you submit the original template for the Project without filling in any of your findings/information (either accidentally or purposely). You **WILL** receive a zero.
- It is recognized that there may need to be research done online to complete some of the assignments (especially, the team project). You will be given appropriate formatting standards for those assignments, which **must** be adhered to.

Jones and Bartlett Lab Assignments:

- These involve **doing** as well as applying what you’ve learned in the textbook and any lectures.
- For how to use and perform the labs, see the **Common-Lab-Tasks** document in the Jones and Bartlett Labs and Lab Info module. This was created by Jones and Bartlett.
- For more information on how to sign into the labs, see the **Jones and Bartlett Account Info** document in the Jones and Bartlett Labs and Lab Info module.
- For how to access and perform the labs, you **MUST** view the **video** in the Jones and Bartlett Labs and Lab Info module. Although recorded for the Fall 2022 semester, the same methodology applies.
- For general lab **content and submission** information, see the **JBL-Labs-Submission-Guidelines-FAQs** document in the Jones and Bartlett Labs and Lab Info module.
- Each lab will consist of:
 - A required online quiz component (in Folio, graded automatically), and
 - A required file (or files) that must be submitted to a Folio assignment. These files will generally contain (1) required images and (2) may contain required and/or extra credit short answer questions.
- You may upload lab files to the assignment between the due date and the end/late date. **If you do this, the grade of your assignment will be subject to the corresponding deduction in the table above. Lab Quizzes are only due on the due date. Just doing the lab quiz without uploading any files to the assignment will result in a 20% deduction to the score of the quiz, as this indicates to me that you probably did not do the lab.**



Module (Chapter) Quiz Policies

- **Unless otherwise notified to you**, chapter quizzes and CSSIA interactive quizzes will generally open on Monday of the week associated with them **and will close on the subsequent Monday right before class at 11 am.**
- You will **ONLY** receive notification of any deviation from this policy in a Folio announcement.
- Note that although each quiz is worth ten points, there will be a varying number of questions per quiz. Some may have ten, some may have as many as 20. Thus, there is no uniform value applied to each question throughout the course.

Mid-Term and Final Exam Policies

- Your tests will consist of a combination of multiple choice/T-F and short written response questions. As this is an online course, both the Mid-Term Test and the Final Test **will be administered via the Folio test application.** I use the *Respondus Lock-Down Browser tool* for all online tests.
- **Mid-Term Test:** *You will need to notify me in advance if you cannot take this test.* Failure to do so, without a medical excuse or extreme emergency that can be documented, will result in a late assessment of a 15% deduction on the test. Makeup of this exam, with or without the deduction of 15%, will only be given within one week of the original test. No make-up will be given more than one week after the original date of a test – in this case, the test will be scored as a zero.
- **Final Test policy:**
 - The Final Test is **mandatory**. While it will predominantly contain material covered since the mid-term exam, approximately 5 to 10% of the questions will come from important material covered before the mid-term exam.
 - Failure to take the test within the time window allotted without a legitimate reason made known to me in **advance** will result in a zero for the exam. If you have a **valid reason** why you cannot take it during the availability dates, you **must** notify me in advance to have it specially scheduled.
- Since these are online tests, you may use your textbook and any notes you have. However, you may not collaborate with any other students. The use of the Respondus browser will prevent you from using your computer for any other purpose while you are taking the test. **The Respondus Lockdown Browser will not work with a Chromebook computer.** Plan accordingly.

The National Cyber League (NCL)

- Complete information regarding the NCL will be provided from their website.
- Participation in the NCL competition is required for this class.
- This is a Capture the Flag competition that covers many of the tools and techniques we cover in class into practice.



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- There is a fee of \$35 to register for the NCL. This is a required course fee, but is not due at the start of class, it is due when you register.
- Along with your grade, you will receive a scouting report that many agencies and corporations use in recruiting.
- For dates and points, see the separate NCL document.

“Table-Top” Exercises (TTX)

- To discuss ethics or current topics in information security, students will participate in multiple team exercises during class.
- There will be six such exercises, you will be graded for attendance at five of them (so you may miss no more than one).
- Each exercise will last approximately 20 minutes.
- Each “team” will discuss the topic and think through a conclusion. The conclusion will be written in a Folio discussion question, but one or more students per team will present it to the class.
- The written conclusion, with the names of team members, **MUST** be in the first line of your discussion question reply.
- **Each “team” MUST consist of a minimum of two students and a maximum of five students.**
- Despite receiving credit for “attendance”, each student is expected to participate.
- It is very likely that you will be in a different team for each exercise.

Semester Individual Project Policies:

- An individual project will be assigned no later than the fourth week of class.
- The project will have **ONE** submission (in previous semesters, it was submitted in two parts).
- The project will contain one “requirements” quiz given in the week after it has been assigned to ensure that I know that you understand the requirements of the project. This is a **required** quiz.
- More **specific** policies will be given when the project is assigned.

Making Up Assignments and Quizzes – Excused Absences

- To be excused from class for **five or more class days** (i.e., Monday, Tuesday, Wednesday, Thursday, Friday) a student **MUST** contact the **Office of the Dean of Students** and submit appropriate documentation. This not only allows me to excuse you from class and make up the work, it also notifies **your other professors and instructors** of your absence and your need to make up work.
- The link to Dean of Students Office for this purpose is:
<https://students.georgiasouthern.edu/dean/resources/notification-to-faculty/>
- Legitimate absences of five or more class days include, but are not necessarily limited to:
 - Death in the family – attendance at a funeral, mourning
 - Severe illness, whether COVID-related or not
 - Severe injury, whether from an auto accident or other accident



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- Loss of domicile, whether from a fire, natural disaster (particular to you, such as a tornado affecting only your community – see below, **Changes to Syllabus**, for general disasters affecting the entire university) or eviction.
- Military service – orders for reserve or National Guard duty
- Documentation for absences of five or more days **submitted to me (only) and not the Dean of Students Office** will **NOT** be honored.
- Documentation for absences of one to four days may be submitted to me. Such documentation should be the same kind of documentation submitted to the Dean of Students Office, such as a doctor's note or hospitalization, funeral notice, etc.
- Any assignment or quiz/test due during the period indicated by an email from the Dean of Students Office **must be made up within seven days after the return to class date in that email**. Such makeups will not be assessed any late deduction. Such assignments or quizzes/tests will **NOT** be allowed to be made up after that seven-day period.
- Any assignment or quiz/test due during the period I granted (1-to-4-day absence) must be made up within seven days after the return to class date I set. Such makeups will not be assessed any late deduction. Such assignments or quizzes/tests will **NOT** be allowed to be made up after that seven-day period.
- No assignments or quizzes/tests may be made up after the **last day of class, which is Monday, April 29**.

Resubmissions and Extra Credit

- “Re-do’s” (resubmissions) of a previously taken assignment or test are **not** allowed (yes, this has been requested in the past). **Once an assignment or test is scored (as a zero, or any score greater than zero), that score is final.**
- Extra Credit assignments, questions added to a lab, assignment, or a test **are a privilege, not a right**. Such assignments/quizzes may be given at my discretion.
- To be fair to all students, such assignments/quizzes will **only be offered to the entire class. Individual extra credit assignments/quizzes will not be given.**
- **Under no circumstances** will any such assignments/quizzes be given ***after the university's last day of class, which is Monday, April 29***.

Changes to Syllabus

- **As your instructor, I reserve the right to change the class schedule, including assignments, labs, and tests, *only if prior notice is given to the class*.**
- Regarding hurricanes or other natural disasters. If classes are canceled by the university and/or an evacuation has been ordered by the authorities in Chatham County (Savannah) or Bulloch County (Statesboro), the instructor has the right to:
 - Cancel assignments or tests.
 - Revise due dates for assignments not canceled; revise the date of tests.
 - Revise components of assignments or tests



- Revise the value of assignments or tests.
- Revise the overall value of the course (e.g., the course will now be worth 940 instead of 1000 points)
- **Such changes will be broadcast to you via eCampus e-mail.** If classes are canceled and/or an evacuation is ordered, you are responsible for, as best as possible, keeping up with university Eagle Alert updates and changes issued by me via Folio e-mail. Changes to the *course* will **only** be made from me to you by **Folio e-mail and Folio announcements.**

Plagiarism and Cheating

- **Violations of the Georgia Southern University Academic Dishonesty Regulations (including cheating and plagiarism) are taken very seriously. Any violation of this policy will become part of the student’s permanent educational record. More information on the Academic Integrity policy and procedure can be found at <http://students.georgiasouthern.edu/conduct/files/2018-2019-Code-of-Student-Conduct-FINAL-1.pdf>**
- In this class, the **textbook homework assignments, lab exercises (unless otherwise specified), and exams *must be your own work.***
- ***STUDENTS ARE PROHIBITED FROM USING COPYRIGHTED, PLAGIARIZED MATERIAL SUCH AS INSTRUCTOR MANUALS/SOLUTIONS OBTAINED EITHER ONLINE OR FROM ANOTHER STUDENT. ANY WORK FOUND TO HAVE BEEN SUBMITTED IN VIOLATION OF THIS POLICY SHALL RECEIVE A ZERO, AND THE POSSIBILITY THAT THE STUDENT(S) INVOLVED MAY BE TURNED IN TO THE AASU HONOR COURT.***
- If you are confused as to the difference between helping each other (which is encouraged) and cheating (which will not be tolerated), ask your instructor.

Acceptable	Cheating
Including a brief quote from a web page with the source cited.	Copying entire pages or paragraphs and republishing it as your own.
Using graphics from a free clip art or graphic site.	Using someone else's graphics without permission.
Discussing an assignment with another student.	Copying another student's work or file.
Looking at online sources or asking for a classmate’s help to figure out what to do.	Duplicating a classmate’s lab answers as your own, without performing the lab activity yourself.

Disability-Related Accommodations

In compliance with the Americans with Disabilities Act (ADA), this course will honor requests for reasonable accommodations made by individuals with disabilities or demonstrating appropriate need



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for learning environment adjustments. Students must self-disclose their disability to the Student Accessibility Resource Center (SARC) before academic accommodation can be implemented. Students requesting alternative educational arrangements must submit a completed COVID-19 Alternative Educational Arrangement Request Form to the SARC office. For additional information, please call the SARC office at (912) 478-1566 on the Statesboro campus, or at (912) 344-2572 on the Armstrong and Liberty campuses.

Illnesses

See above under **Making Up Assignments and Quizzes – Excused Absences**. In particular, if you need to self-report either a confirmed or suspected positive COVID-19 diagnosis, have received self-quarantine requirements, or have symptoms with pending test results, please complete the CARES Center [COVID-19 self-reporting form](#) (through the [MyGeorgiaSouthern portal](#) under "COVID-19 Information & Resources"). You may also reach the CARES Center by using the [MyGS mobile app](#), calling 912-478-CARE (M-F 8am-5pm), or emailing covidsupport@georgiasouthern.edu. The CARES Center should not be used for medical advice. If you need medical advice, you need to call your health provider or 911.



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Detailed Semester Schedule by Topic (includes Tests & Project)

Week # Begins	Ch(s)	Topic - Notes
1 – Mon, Jan 8	1	Introduction, including syllabus, Jones and Bartlett Labs. Fundamentals of Network Security
2 – Mon, Jan 15	2	Monday, Jan 15 is MLK Jr. Holiday, the University is closed. Network Security Threats
3 – Mon, Jan 22	3	Common Network Topologies & Infrastructures;
4 – Mon, Jan 29	4	Network Design Considerations. Registration for NCL opens on Mon 1/29 Individual Project assigned this week
5 – Mon, Feb 5	5	Firewall Fundamentals
6 – Mon, Feb 12	6	Firewall Implementation
7 - Mon, Feb 19	7	Firewall Deployment Considerations.
8 – Mon, Feb 26	8	Sunday, March 3: last day to register for NCL and receive the points for just registering. Configuring Firewalls; Mid-Term Exam covers Chapters 1 – 7
9 – Mon, Mar 4	9	Monday, March 4 is mid-term, last day to withdraw without a WF; VPN Fundamentals
Monday, March 10 - Friday, March 16: Spring Break		
10 – Mon, Mar 18	10	VPN Management. Friday Friday, March 22: absolute LAST day to register for NCL. If you haven't registered by this date, you WILL receive a ZERO for ALL the NCL grade. In addition, in this course, credit for Gym challenges will ONLY be given through Sunday, March 24. Gym attempts AFTER March 24 will not be given credit for this course.
11 – Mon, Mar 25	11	VPN Technologies. NCL Practice Game Mon Mar 25 – Sunday, March 31
12 – Mon, April 1	12	VPN Implementation. NCL Individual Game Friday Apr 5 – Sunday Apr 7
13 – Mon, April 8	13	Firewall Security Management. Individual Projects are due on Friday, April 12. There is NO end/late date for this assignment.
14 – Mon, April 15	14	Best Practices for Network Security Management
15 – Mon, April 22	15	Emerging Technology & Regulatory Considerations.
16 – Mon, April 29		Last day of class is Monday, April 29
Final Exam – Date TBA, the university's schedule is Tues, April 30 – Sat May 4		



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Detailed Lab Schedule

<i>Week # Begins</i>	<i>Lab & Week Assigned</i>	<i>Lab & Week Due</i>
1 – Mon, Jan 8		
2 – Mon, Jan 15	OUR 1st Lab, JBL Lab 1 , Accessing the Network with Common Security Tools, assigned	
3 – Mon, Jan 22	OUR 2nd Lab, JBL Lab 2 , Defending the Network from a Simulated Malware Attack, assigned	OUR 1 st Lab due this week
4 – Tues, Jan 29	OUR 3rd Lab, JBL Lab 3 , Designing a Secure Network Topology, assigned	OUR 2 nd Lab due this week
5 – Mon, Feb 5		OUR 3 rd Lab due this week
6 – Mon, Feb 12	OUR 4th Lab, JBL Lab 4 , Configuring the Windows Defender Firewall, assigned	
7 - Mon, Feb 19		OUR 4 th Lab due this week
8 – Mon, Feb 26	OUR 5th Lab, JBL Lab 5 , Planning & Configuring a Physical Firewall Implementation, assigned	
9 – Mon, Mar 4		
<i>Monday, March 11 – Friday, March 16: Spring Break</i>		
10 – Mon, Mar 18	Our 6th Lab, JBL Lab 7 , Planning & Configuring Custom Firewall Rules, assigned	OUR 5 th Lab due this week
11 – Mon, Mar 25		Our 6 th Lab due this week
12 – Mon, Apr 1	Our 7th Lab, JBL Lab 8 , Configuring a VPN Server with pfSense, assigned	
13 – Mon, Apr 8		Lab 7 due this week
14 – Mon, Apr 15	Our 8th Lab, JBL Lab 9 , Configuring a VPN Client for Secure File Transfers, assigned	
15 – Mon, Apr 22		Lab 8 due this week
16 – Mon, Apr 29		

Note that the lab numbers listed above, along with their titles, correspond to the Jones and Bartlett lab numbers and titles. There are eight labs. Labs are typically due at the end of the week stated, for example, on Friday at 11:59 pm on the week stated.