



IT 2333 – IT Infrastructure
Spring 2024 – SC 1503A; Mon & Weds 1:25 – 2:40
Asst. Prof. Frank H. Katz

Course Description:

The course aims to provide students with a thorough understanding of the concept of an IT infrastructure, the components in an IT infrastructure, and the importance of information assurance and security in the selection, creation, integration, and administration of an IT infrastructure.

Course Outcomes:

On completion of the course, students will be able to:

1. Describe the components of an IT infrastructure, i.e., hardware including networking, software (systems software and application software), people, and processes, and the way in which they interact.
2. Describe the major functions of an operating system.
3. Describe the major components of an operating system.
4. Describe the different types of operating systems.
5. Install at least one modern operating system.
6. Explain the responsibilities associated with system, server and network administration and management.
7. Install network devices.
8. Describe the security services that a well-designed IT infrastructure must provide.
9. Describe the main sources of security threats and possible countermeasures.
10. Explain why security must be built into the design of an IT Infrastructure from the beginning to be most effective.

ABET Outcomes

Upon graduation, students with a BS in Information Technology will be able to:

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



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Administrative Information

Instructor: Assistant Professor Frank H. Katz

Class: Science Center (SC) 1503A; **Monday – Wednesday, 1:25 pm to 2:40 pm**

Office / Phone: Science Center, Armstrong Campus. Office phone is 912-344-3192 or just 4-3192 if you are on campus.

E-mail: fkatz@georgiasouthern.edu. However, to consolidate emails in one location, **unless you have an emergency, I require that you email me via Folio's email function.** When using Folio's email function, you **MUST** enter the Folio class space to compose your email, otherwise, it could get lost. For more details, see my Communication Policies section below.

Prerequisite: A minimum grade of C in IT 1130. Note that **STAT 1401 is no longer required.**

Office hours: T - Th, 2 pm – 5 pm. I am available by in-person appointment as well as Zoom or Google Meet.

Personal website: <https://franktheitprof.000webhostapp.com/index.html>

Textbook: We will not be using a traditional textbook. I will assign readings from the web, or pass out readings in class, and post them on Folio (I will not hand out things from my office). Information Technology is a field that is continually changing; therefore, texts and handouts cannot be completely up to date. You must learn to gather information on your own from multiple sources to get as close to up to date as you can. It is expected that you will be keeping up with the field as we go through the course, ready to discuss news as it relates to the course. Please keep up with blogs, news sites and podcasts. There will be questions on exams that relate to current events. It is not required that you stay up on all current events, but it will assist you in answering questions on exams.

Materials and Resources You Will Need:

- Students are required to bring a USB 2 or 3 external Drive with at least 200 gigabytes of space for this class. **A SOLID-STATE DRIVE IS HIGHLY RECOMMENDED.** You will be installing operating systems and applications under those operating systems onto these drives using VMWare. There will be times that you will need to turn these drives in for grading purposes.
- Students are required to bring a **USB Thumb Drive** that has at least 4 gigabytes of space. You will be building an IT toolkit on this drive.
- You will need to register a **domain**, accept e-mail at that domain, and have a web presence at this domain.
- Students are required to have a **Windows 10 computer**. It is required for the projects.
- To draw computer network diagrams or any other system-related diagrams, my personal recommendation is the **free draw.io** software.



IMPORTANT DATES

Monday, January 8	First day of Class
Monday, January 15	MLK Jr Holiday – no classes
Wednesday, February 28	<i>Likely</i> date of the Mid-Term Test
Monday, March 4	Mid-term of the semester, last day to withdraw without a WF
Monday, March 11 – Friday, March 16	Spring Break
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

Teaching Methodology

The sessions will consist of lectures and supervised labs. We will use the "**Flipped classroom Approach**" to deliver the course, in which the assigned readings and the online quizzes cover "what", the labs cover "how" and the lectures cover "why". I will often demonstrate how to do a "lab" task in class, and then you will follow my instructions and do it yourself. Consequently, you will need to be prepared to do labs in class, which means bringing your SSD and your thumb drive to class each day we meet.

The lectures and labs assume that students have completed the reading assignments and the online quizzes before coming to class. Students must be self-motivated and responsible for keeping up with due dates for readings, assignments, and other activities.

Grading Schema:

Your grade will depend on your performance in the following activities.

ITEM	Number	Value	Pts of 1000
Resume	1	15	15
In-Class Discussions (4 of 5)	4	10	40
Module "Vocabulary" Quizzes	9	10	90
CSSIA "E-Mate" Interactives & associated quizzes (placed in corresponding modules)	5	15	75
Hard Drive Project	1	175	175
Thumb Drive Project	1	100	100
Domain Project	1	100	100
Teams HW as a Quiz	1	1	35
Wireless HW & Contingency Planning Case	2	50	100
Mid-Term Test	1	120	120
Final Test	1	150	150
Total			1000



Your grades are **performance-based** – not effort-based – and rely on your ability to demonstrate that you understand the material covered. Any student expecting an “A” in the course should be prepared to go above and beyond the minimum requirements of the course and demonstrate he/she has achieved a **mastery** of the material.

TOTAL POINTS EARNED	LETTER GRADE
>= 900	A
Between 800 & 800	B
Between 700 & 799	C
Between 600 & 699	D
< 600	F

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 email system**. 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.
- When using the Folio email system, **you MUST first “ENTER” our class section and THEN compose your email**. Otherwise, it is possible that your email might get “lost” in Folio.



Classroom Etiquette

As a courtesy to others, please:

- Turn off all cell phones.
- Remove earbuds and earphones.
- Refrain from text messaging in class.
- Do not use PCs/laptops during lectures, except for doing work in class.
- Refrain from arriving to class late, departing class early, and exiting/entering at your leisure.

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

- **ALL** assignment submissions will be submitted in Folio. **NONE** may be submitted via an attachment to an email, whether sent to my georgiasouthern.edu address or Folio email.
- Individual homework assignments are clearly indicated as such. *You are expected to **do your own work on each of these assignments**. It is possible that when working on a lab **IN CLASS** you may ask another student for assistance if you are unsure of how to perform a task, and that is acceptable.* However, collaboration with other students on graded assignments 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. Some (but not all) Folio assignments may have 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	

- Assignments that use the due date / end date schema described above will be identified when assigned. **Not all assignments (projects, etc.) will use this schema.**
- Quizzes and Tests do not have the due date/end date schema described above. **All quizzes and tests are due on their due date/time.**
- 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. 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.
- Assignments submitted in a method other than described will not be graded. 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.**
- **Submitting an “empty” file will result in a zero. You will NOT be allowed to resubmit the file for a grade.**
- 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.**
- It is recognized that there may need to be research done online to complete some of the assignments. You will be given appropriate formatting standards for those assignments, which **must** be adhered to.

Quiz Policies

- Throughout the course, “module” quizzes will be assigned on various topics (Data Center, ITIL, Operating Systems, etc.). **Quizzes will be assigned immediately after the class period in which the module’s topic was first discussed** (usually, but not always, a Tuesday) **and will close right before the class on the following Monday.** If a topic was first discussed on a **Wednesday**, then the period will be from right after that **Wednesday** to right **before** the class on the **following Wednesday.**
- The same timing goes for the quizzes on the associated CSSIA interactive modules.
- You will **ONLY** receive notification of any deviation from this policy in a Folio announcement.
- It is very likely that each quiz will contain differing numbers of questions, but they will always be worth the number of points specified in the schema above.

Mid-Term and Final Test Policies

- Your tests will consist of a combination of multiple choice/T-F and short answer questions. Both the Mid-Term and Final Tests **will be administered via the Folio test application.** I use the *Respondus Lock-Down Browser tool* for all online tests.
- **All tests will be administered in class.** The Final Test will be administered during the period assigned by the university for courses in the Monday -Wednesday 1:25 am to 2:40 pm class time slot. You will receive a password in that will unlock the test for you. In that way, you **MUST** be in class to take the test.
- **The Mid-Term Test:** *You will need to notify me in advance if you cannot be present for 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. Making up this Test, 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** (i.e., even if you have a > 90% score in the course going into the test, you are not exempt from taking it). While it will predominantly contain material covered since the Mid-Term Test, the Final Test requires that you know and understand concepts and material covered throughout the course.
 - Failure to take the test in class within the time window allotted without a legitimate reason made known to me in **advance** will result in a zero for the Test. If you have a **valid reason** why you cannot take it in class, 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.

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, but it also notifies **your other professors and instructors** of your absence and your need to make up their 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
 - 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.**

In-Class Discussions

- To discuss ethics or current topics in information technology, 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 15 minutes.
- Each “team” will discuss the topic and think through a conclusion. The conclusion will be written, but one or more students per team will present it to the class.
- The written conclusion, with the names of team members, will be turned in.
- 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.

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 Folio 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 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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Tentative Semester Schedule by Topic (includes Tests & Project)

This schedule is subject to change. I will make announcements in class, and you are responsible for obtaining that information. Specifics (such as exam dates, reviews, etc.) will be announced in class. There will be multiple assignments and in-class projects during the semester, all of which, including due dates, will be announced in class and on Folio.

Week # Begins	Topic - Notes
1 – Mon, Jan 8	Syllabus & Resume Writing
2 – Mon, Jan 15	Monday, January 15 is MLK Jr. Holiday, the University is closed. 1 - Data Center Management. Hardware Project is assigned
3 – Mon, Jan 22	2 - Service Management (ITIL)
4 – Mon, Jan 29	3 - Hardware
5 – Mon, Feb 5	4 - Operating Systems
6 – Mon, Feb 12	5 - Virtualization
7 - Mon, Feb 19	6 - Networking
8 – Mon, Feb 26	Mid-Term Exam in class on Wednesday, February 28. It will only cover Data Center Management through Virtualization 7 - Wireless
9 – Mon, Mar 4	Monday, March 4 is mid-term, last day to withdraw without a WF. 8 - Knowledge Management
Mon, Mar 11 – Friday, Mar 16: Spring Break	
10 – Mon, Mar 18	9 - Teams. Thumb Drive & Domain Projects are assigned
11 – Mon, Mar 25	Hardware Project is graded in class this week – you must be present in class for it to be graded
12 – Mon, Apr 1	<i>Work on Thumb Drive Project</i>
13 – Mon, Apr 8	10 - Disaster Recovery & Business Continuity
14 – Mon, Apr 15	11 - Security
15 – Mon, Apr 22	Thumb Drive Project is graded in class – you must be present in class for it to be graded
16 – Mon, Apr 29	Last day of class is Monday, Apr 29
Final Exam – Date TBA, depending on university schedule, given in class	