cit@WKU
Computer Information Technology

SYLLABUS
SP2019
Course: CIT 484-740 Systems Security II
Faculty: Terry Pasley

Course Catalog Description
A continuation of CIT 482. Provides additional study and experience with managerial/operational issues affecting the security of enterprise computers and networks; examines available tools and opportunities in the field.

Topics and Objectives

Upon completion of this course, the student shall be able to:	How the student will develop outcomes	How the student will be assessed their learning on these learning outcomes
Perform a forensic examination on a computer.	Readings, videos, research.	Lab exercises and exams.
Design a network security configuration.	Readings, videos, research.	Lab exercises, network design, quizzes, and exams.
Configure and test a VLAN.	Readings, videos, research.	Lab exercises using Packet Tracer and exams.
Use a VPN.	Readings, videos, research.	Lab exercise using virtual machines and exams.
Configure and test a router to do packet filtering.	Readings, videos, research.	Lab exercises using Packet Tracer and exams.
Configure and test a firewall.	Readings, videos, research.	Lab exercises and exams.
Explain the security issues with wireless networks.	Readings, research.	Quizzes / exams.
Explain the security issues with mobile devices.	Readings, research.	Quizzes / exams.
Explain the strengths and weaknesses of intrusion detection and intrusion prevention systems.	Readings, research.	Quizzes / exams.

Upon completion of this course, the student shall be able to:	How the student will develop outcomes	How the student will be assessed their learning on these learning outcomes
Students in this class will understand symmetric and asymmetric encryption usage.	Readings, videos, research.	Assignments, quizzes / exams.
Describe the principles of security management and risk assessment.	Readings, research.	Quizzes / exams.
Understand the use and importance of security policies and procedures.	Readings, research.	Quizzes / exams.
Demonstrate knowledge of security auditing principles.	Readings, research.	Quizzes / exams.
Explain the legal and ethical aspects of information security.	Readings, research.	Quizzes / exams.

Welcome!

Welcome to Western Kentucky University and CIT 484, System Security II. My name is Terry Pasley, and I am optimistic that you will each have a rewarding and enjoyable experience in this class. I teach several security classes as part of my full-time job with KCTCS. We will be covering many aspects of security in this class. While the textbook provides coverage of all the subject areas specified for the Security+ Certification, I will be supplementing that material extensively from the Internet. I have taken and passed the Security+ exam (several years ago), and I have mixed feelings about it. At least when I took it, I thought it was too hard to be an "entry-level" exam (it had several questions about policies and procedures I thought a "technician" would not be responsible for).

If all goes according to plan we will do a number of "hands-on" exercises. We will cover perimeter defense and internal network design for best security in this class, and I also hope to show you something about computer forensics. In some cases you can do this on your computer using virtual machines. It might be necessary in other cases to have you remotely access my lab at Maysville to do some exercises (note I said "remotely" – you do this from wherever you are – you don't have to come to Maysville). If your ISP is satellite based you will have problems doing this and will have to find another way of accessing the Internet for those exercises.

Keep in mind this is a "400-level" class. You will soon be graduating. I expect you to be capable of functioning at a high level by now, including being able to research topics and

learn on your own as well as finding ways to working through problems as they arise. I will be encouraging you to do this. Nothing makes me happier than to receive an email from a student saying "I had a lot of trouble with this, but I kept working till I figured it out". That's exactly what will be expected of you next year out in the workplace – keep working till you figure it out.

If you need to discuss anything with me, either personal or course related, please send an email to one of the addresses listed in my contact information.

When emailing me I would prefer you use your wku.edu email. If you use another account I may miss the email, thinking it junk.

Class Location/Times
This class is delivered in an online format. Because it contains a significant number of online assignments, it will be necessary for students to have access to reliable Internet connections. The class is available at the following website: https://blackboard.wku.edu. In addition, if all goes according to plan we will do a number of "hands-on" exercises. We will cover mainly defensive strategies such as firewalls, VLANS, and VPNs in this class, and I also hope to show you something about computer forensics. In some cases you can do this on your computer using virtual machines. It might be necessary in other cases to have you remotely access my lab at Maysville to do some exercises (note I said "remotely" – you do this from wherever you are – you don't have to come to Maysville). If your ISP is satellite based you will have problems doing this and will have to find another way of accessing the Internet for those exercises. A computer with a Windows operating system is required to connect to my lab.

Required Material(s)
Textbook:
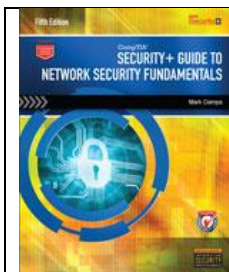
	CompTIA Security+ Guide to Network Security Fundamentals 5th Edition Mark Ciampa Western Kentucky University ISBN-10: 1305093917 ISBN-13: 9781305093911 608 Pages Paperback © 2015

Instructor Information
Name: Terry Pasley
Adjunct Instructor
Email: Terry.Pasley@wku.edu, professor.pasley@gmail.com
Phone number: 606-883-3984 This is my home phone. Use it in case of emergency. I do try to sleep, so try not to call after 11:00PM EST. Email is a better way to get in touch with me.

Assignments & Point Values
Your grade for this course will be determined according to the following scheme:

Activities	Percentage of Grade
Quizzes / Exams	25 %
Lab exercises and written assignments	25 %
Class Discussions	10 %
Comprehensive Final Exam	40 %

The grading scale that will be used is:

- A : 89.5 % - 100 %
- B : 79.5 % - 89.5%
- C : 69.5 % - 79.5 %
- D : 59.5 % - 69.5 %
- F : Less than 59.5 % (or cheating)

Please see the Course Master Schedule in the Start Here section of Blackboard for more details.

Academic Dates
To determine important academic dates such as the last day to drop with a W, or the final exam schedule, please see http://www.wku.edu/registrar/academic_calendars/

Activities
There are five major activities in this course. A brief explanation of each activity is as follows:
- Quizzes – You will complete quizzes on the assigned reading material.
- Lab exercises – You will complete various lab exercises, several on computers in my lab at Maysville. You will not have to come to Maysville to do this – you will access my lab remotely.
- Written assignments – Lab exercises will sometimes have a written component, as will other assignment, the Discussion Board, and the Final Exam.

- Final Exam – The <u>proctored</u> final exam will be comprehensive and administered as scheduled by the university.

Final Exams
<u>All</u> CIT exams must be proctored. While you may be able to use the proctor of your choice at the location of your choice, you must register with the WKU testing center in order to have your proctor approved (see http://www.wku.edu/testing/ for more details). Note that you must pre-register with the testing center before taking the exam, which is usually no less than 10-days prior. I highly suggest that you register early. Final exams must be taken during final exam week. You may choose Monday through Wednesday during finals week to take the exam.

As the final exam is an assessment and not a learning activity, correct answers are not provided. However, if you wish to review your exam, it will made available to you. However, as with other on-campus final exams, you must know that student review can only be accomplished on-campus (Bowling Green), in a proctored environment, during a full term (fall and spring) following that of the exam's administration. This step is necessary to protect the integrity of the exam.

Also, since the final exam is an assessment, your score will likely be lower than you have previously experienced with the learning activities. Therefore, after completing the exam, your overall average will likely go down, not up. This means you need to be sure and complete all of the learning activities as assigned in order to have a very high average before taking the final.

> *Important note on the Final Exam: The Final Exam is usually composed of questions requiring written answers and so is not the multiple choice type questions you find on the quizzes. The Final Exam must be taken Monday through Wednesday, May 6 – 8, 2019.*

Attendance Policy
Because this is an online course there is no classroom attendance requirement. However, I strongly encourage you to remain actively involved in this course. Some suggestions for doing this are: 1) check your WKU email and Blackboard regularly for course announcements and information; 2) stay abreast of all due dates as they are added to the course schedule on Blackboard; 3) complete all work on time and to the very best of your ability.

For all discussion responses, you will be graded on four characteristics:

- **Timeliness** - For full points, you must contribute to the discussion four out of seven days

- **Style/Mechanics** - For full points, postings must be free of grammar issues, and follow APA Style
- **Comprehension** - For full points, postings must reflect comprehension of the topic(s)
- **References** - For full points, postings must be supported with the text or other scholarly sources

Instructor Feedback

Chapter quizzes are graded automatically by BlackBoard when possible. Some questions will require hand grading. Your score will show in Grade Center. I will endeavor to post other assignment grades within 5 days of the due date. I tend to comment little if you are doing well (>80%) and comment more if you are not (< 80%). However, at any time if you have questions about any comments and/or grades, please contact me within three or four days at most while the issues are still fresh in both our minds. This will help to iron any issues out as soon as possible.

In the event a Blackboard grading rubric is used, that is your feedback. Again, if you have additional questions, contact me as soon as possible.

Also, if I mistakenly note you as missing any assignments and you did submit them, please <u>immediately</u> let me know the time and date you posted. I will be very, very happy to download the post and correct my records. I will not make changes to grades after one week of posting.

Non-Graded Assignments

Some activities that you will complete during the course are ungraded or carry no point value (like reading assignments). However, it is very important that you complete these activities. Non-completion of these activities may negatively impact your graded work.

Incompletes

All incomplete requests must follow school guidelines. See the University catalog.

Extra Credit

There is no extra credit or make-up work as the class assignments reflect what is required for successful completion of this course.

Academic Standards

I expect all students to support the same respect for individuals, commitment to issue and problem resolution, and open communication and feedback as in any learning environment.

Specifically, all students are expected to:

- Accept responsibility and accountability for all use actions and content posted to any online classroom, public meeting or personal inbox (email).
- Maintain the same ethical standards expected in a collaborative, academic environment.
- Demonstrate respect for all faculty, students, and staff regardless of age, race, gender, religion, national origin, veteran's status, disability, or sexual orientation.

In the online environment, the following will not be tolerated:

- Harmful, threatening, libelous, or abusive content
- Profanity of any kind
- Copyright infringement or violation of patent, trademark, proprietary information, or confidentiality agreements
- Misrepresentation of identity through alteration of inbox (email) names
- Posting unsolicited advertisements to public meetings or private inboxes (no spamming)
- Transferring computer viruses, intentionally or unintentionally, or other code that disrupts or interferes with other users' use of the online environment or personal computers, systems, or networks.

Honesty

I highly value academic honesty. A student must always submit work that represents his or her original words or ideas. If any words or ideas are used that do not represent the student's original words or ideas, then the student must cite all relevant sources. The student should also make it clear the extent to which such sources are used.

Words or ideas that require citation include, but are not limited to, all hardcopy or electronic publications, whether copyrighted or not, and all verbal or visual communication when the content of such communication clearly originates from an identifiable source.

All submissions to any public meeting or private mailbox fall within the scope of words and ideas that require citations if used by someone other than the original author.

Academic dishonesty in an Online learning environment could involve the following:

- Having a tutor or friend complete a portion of your assignments
- Having a reviewer make extensive revisions to an assignment
- Copying work submitted by another student to a public class meeting
- Using information from on-line information services without proper citation

Any of these practices could result in charges of academic dishonesty. Sanctions range from failing assignment or class grades to expulsion.

I consider academic honesty a very serious issue. I have, and will fail students that I discover are not adhering to the above guidelines.

Class Navigation
Go to http://blackboard.wku.edu and follow the login instructions (usually available by the first day of class). This site will be the primary means for quizzes, grades, announcements, exam and homework scores, reading materials, discussions, and other supplemental course information that you will need. Please be sure and check this site regularly.

Computer Access
This class requires each student to make use of several software packages, various other software tools and the Internet. All required resources are available either in the general Student Computer Labs across campus, on WKU Extended campuses, from my lab at Maysville, and typically, at public libraries. Lack of hardware, software and Internet connectivity at home to complete any assignment is not an acceptable reason for not completing work. You may work from any location you prefer (home, work, etc…), but you will need access to MS Office software or the equivalent.

NOTE: Connecting to my lab at the Maysville Community and Technical College is best done with a computer running a Windows operating system. Other methods may work, but I will be of little help getting these to work. In such cases you will need to find a suitable computer to use. I do think you will find these assignments interesting and worth the effort.

Technology Issues
School servers are unavailable from time-to-time. Accordingly, I will accept emailed assignments to my personal mailbox for time-stamping purposes only. However, once Blackboard is available to you, in order to receive a grade, the assignment must be posted to the appropriate submission area (which is email through BlackBoard).

Also, from time to time the Blackboard system will lock-up during a quiz or exam. If this happens, please contact me as soon as possible. I can only reset the exam, which means you will have to take it over (this includes final exams). If you wait until the last minute to take an exam, you may not be able to reset due to time limitations.

For comments/complaints about technology issues (for example, Blackboard exam problems), please contact the Office of the Chief Information Technology Officer (270-745-2243).

Late Assignments
Due to the nature of this course and based upon my teaching experience, it is critical that you are timely in submitting the assignments. Since all assignments are made

available before they are due, no late work will be accepted for any reason. Again, no late work will be accepted for any reason. Please do not wait until the last minute to do your assignments; no late work will be accepted for any reason.

Cancellations
If you are dropped for any reason (lack of payment, etc.), your access to Blackboard may be terminated. In this event you will **<u>NOT</u>** be permitted to make up on-line course assignments/activities during the time you lost access to Blackboard.

Grievance Process
If you are unhappy with any aspect of the course, please contact me via email with a detailed explanation of the problem. I will do my best to help resolve the issue. If you are still unsatisfied, please contact the program coodinator, Dr. Mark Revels, at mark.revels@wku.edu.

Schedule Exceptions
I will not approve any schedule exceptions.

Title IX Misconduct/Assault Statement
Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholdingWKU's Title IX Sexual Misconduct/Assault Policy (#0.2070) at https://wku.edu/eoo/documents/titleix/wkutitleixpolicyandgrievanceprocedure.pdf and Discrimination and Harassment Policy (#0.2040) at https://wku.edu/policies/hr_policies/2040_discrimination_harassment_policy.pdf.

Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Andrea Anderson, 270-745-5398 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121.

Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and MUST report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center at 270-745-3159.

Accommodation Statement

In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, room 1074 of the Student Success Center. The phone number is 270.745.5004. or email at sarc.connect@wku.edu. Please

do not request accommodations directly from the professor or instructor without a letter of accommodation from The Student Accessibility Resource Center.

Ogden Student Course Attendance Statement
The faculty and staff of Ogden College of Science and Engineering are committed to providing you with learning experiences and opportunities. You must assume ownership of your education and be an active participant in the classroom and laboratory to take advantage of these opportunities. Active participation requires you to attend. Scientific studies have shown that attendance during scheduled classroom and laboratory meetings is directly correlated to your performance on assignments and exams and the potential to earn higher grades. Additionally, if you do not regularly attend class, you are missing important information about course topics, due dates, and assignment details that are crucial to your success in the course. Therefore, as a student enrolled in an Ogden course, you are expected to attend every class meeting and to inform your instructor regarding the reasons for any absences as soon as practical. Your instructor may incorporate class attendance/participation as part of the grading criteria.