School of Business and Technology
2019-20

COURSE SYLLABUS

Course Number: IT 747-OL	**Course Title:** Cybersecurity in the Systems Lifecycle		
Fall Semester 2020	**Spring Semester**	**Summer Semester** XXX	**Credit Hours** 3
Name of Instructor: Dr. Ibrahim Waziri Jr.			
Meeting Day, Time, and Room Number: Fully Online - **Asynchronous**			
Final Exam Day, Time, and Room Number: Online			
Office Hours, Location, Phone: Online – By Appointment Only (Number is available on Canvas and Kick-Off Deck)			
E-mail and Web Site : – **Website:** Canvas – **Repo:** https://github.com/iwazirijr/747			
Course Description: This doctorate-level course integrates cybersecurity concepts, principles, tools, and techniques into the system life-cycle including acquisition and purchasing of technology, security requirements definition during requirements analysis, secure software coding practices, auditing processes for production systems, cyber-insurance considerations, and communication security issues with upper management and the board.			

1. BROAD PURPOSE OF COURSE: This doctorate-level course integrates cybersecurity concepts, principles, tools, and techniques into the system life-cycle including acquisition and purchasing of technology, security requirements definition during requirements analysis, secure software coding practices, auditing processes for production systems, cyber-insurance considerations, and communication security issues with upper management and the board.

2. COURSE OBJECTIVES: Upon successful completion of this course students will be expected to:

- Critique ways in which cybersecurity is integrated with traditional business functions in support of system lifecycles.
- Strategize on appropriate approaches on how and when to present cybersecurity issues and potential solutions to higher management and board members.
- Recommend how cybersecurity considerations should be incorporated into solicitations and evaluation criteria for the acquisition, competitive and otherwise, of a variety of technology solutions for an organization.
- Develop effective non-functional security requirements for both hardware, software, and communications services.
- Evaluate the software development process, in-house or outsourced, and recommend standards for secure coding processes.
- Recommend auditing processes, policies, and standards for auditing computer systems in production, including those storing personally identifiable information (PII); and
- Explain risk and its mitigation through cyber-insurance.

3. TEACHING METHOD: Because this class is an asynchronous class. Doctoral students will learn by reading research papers, writing reports, watching referenced videos, and writing a final research paper to be submitted to a journal or conference. As your instructor, it is my responsibility to present learning opportunities through the various components outlined in the course syllabus. As the student, it is your responsibility to do the learning by completing the assigned work, by participating in discussions and group activities with energy, enthusiasm and relevant content.

4. GRADING POLICY

Grade	Grade Range		Deliverable Grade	% of Final Grade
A	90 – 100%		Weekly Paper Summary (10 @ 5% each)	50%
B	80 – 89.9%		Final Research Paper	50%
C	70 – 79.9%			
F	Below 70%		**TOTAL**	**100%**

May 22, 2020 is the last day to add or drop a SU III course without academic record and with a 100% refund
June 19, 2020 is the last day to withdraw from a SU III class with a grade of W

5. CLASS SCHEDULE

Week Module	Topics (instructor to deliver)	Task (student to-do)
Week 1 Module - 1 Kick-Off	• Kick-Off: Syllabus Overview • The System Lifecycle: Where Does it Begin and End?	• Read/Watch Lecture Materials • Submit Weekly Published Paper Summary • Introduce yourself • **Due Fri 05/22 at 6.30PM**
Week 2 Module 2	• Cybersecurity and the Business • Cybersecurity and the Boardroom	• Read/Watch Lecture Materials • Submit Weekly Published Paper Summary • Identify research paper topic • Upload research paper topic and brief description to Professor for approval • **Due Fri 05/29 at 6.30PM**
Week 3 Module 3	• Review of System Lifecycles • Cybersecurity in the System Lifecycle	• Read/Watch Lecture Materials • Submit Weekly Published Paper Summary • Continue working on final research paper • Identify a journal/conference to submit final research paper - Marymount University Library Archives is also an option. • Upload the name and link of identified journal or conference to submit final research paper • **Due Fri 06/05 at 6.30PM**
Week 4 Module 4	• Acquisition Processes	• Read/Watch Lecture Materials • Submit Weekly Published Paper Summary • Continue working on final research paper
Week 5 Module 5	• Cybersecurity and the Solicitation	
Week 6 Module 6	• Competing for Cybersecurity Contracts	• Read/Watch Lecture Materials • Submit Weekly Published Paper Summary • Final research paper – Check-in/Progress • Upload research paper progress (optional) • **Due Fri 06/26 at 6.30PM**
Week 7 Module 7	• Requirements Definition • Inserting Cybersecurity in Requirements	• Read/Watch Lecture Materials • Submit Weekly Published Paper Summary • Continue working on final research paper
Week 8 Module 8	• Secure Coding Policy Development • Secure Coding (DevSecOps)	• Read/Watch Lecture Materials • Submit Weekly Published Paper Summary • Final research paper – Check-in/Progress • Upload draft research paper in journal/conference format for professor feedback. • **Due Fri 07/10 at 6.30PM**
Week 9 Module 9	• Cybersecurity in a Production Environment	• Read/Watch Lecture Materials • Submit Weekly Published Paper Summary • Continue working on final research paper
Week 10 Module 10	• Auditing for Cybersecurity • Cyber Insurance	• Read/Watch Lecture Materials • Submit Weekly Published Paper Summary • Incorporate feedback and email final version to professor for final approval • **Due Fri 07/24 at 6.30PM**
Week 11 Module 11	Class ends/everything is due	• **Upload Final Research Paper and send evidence to professor** • **Due: Friday 07/31 at 6:30PM**

6. REQUIRED TEXT

None – Papers to be provided

7. UNIVERSITY STATEMENTS

CLASS REGISTRATION REQUIRED: Students not officially enrolled in a course offered by the university may not attend class according to university policy. Faculty are responsible for upholding this policy and may not add students to a class roster in Canvas.

ACADEMIC INTEGRITY: By accepting this syllabus, you pledge to uphold the principles of Academic Integrity expressed by the Marymount University community. You agree to observe these principles yourself and to defend them against abuse by others. Items submitted for this course may be submitted to TurnItIn.com for analysis.

STUDENT COPYRIGHT INFORMATION

For the benefit of current and future students, work in this course may be used for educational critique, demonstrations, samples, presentations, and verification. Outside of these uses, work shall not be sold, copied, broadcast, or distributed for profit without student consent.

ACCOMMODATIONS AND ACCESSIBILITY CONCERNS

If you are seeking accommodations (class/course adjustments) for a disability, here are the steps to take:

1. Register as a student with a disability with Student Access Services (SAS) in the Center for Teaching and Learning (CTL). This process takes time, so engage with SAS as early as possible.
2. Once registered with SAS, you may be approved for accommodations by SAS. Approved accommodations will be listed on a "Faculty Contact Sheet" (FCS), and you will receive a copy of this FCS from SAS.
3. Meet with each of your instructors as soon as possible to review your accommodations as per the FCS and have them sign the FCS. This document will help you and your instructors develop a plan for providing the approved accommodations.
4. Let SAS know if you have any concerns about how your accommodations are being implemented in the classroom.

Please remember that:

1. The steps above are required in order to be granted reasonable accommodations for disabling conditions.
2. Accommodations cannot be implemented retroactively. That is, accommodations can only be applied to a course *after* they have been approved by SAS, and *after* you have discussed your accommodations with your instructor and the instructor has signed the FCS.
3. Appointments with SAS staff are scheduled through the Starfish "Success Network" tab (you can access Starfish through Canvas). For more information, check the SAS website, e-mail access@marymount.edu, or call 703-284-1538.

Temporary Challenges

Temporary challenges due to accident, illness, etc. that may result in missing class or navigating general campus access do not necessarily fall under the purview of SAS. If you experience something of this nature, please start by alerting your instructors. The Dean of Student Success may be involved in alerting instructors in extreme cases.

EMERGENCY NOTIFICATION POLICY

When students are absent due to a crisis situation or unexpected, serious illness and unable to contact their individual instructors directly, the Division of Student Affairs can send out an Emergency Notification. To initiate an Emergency Notification, students should contact the **Division of Student Affairs 703-284-1615** or student.affairs@marymount.edu. Emergency Notifications are **NOT** appropriate for non-emergency situations (e.g. car problems, planned absences, minor illnesses, or a past absence); are **NOT** a request or mandate to excuse an absence, which is at the sole discretion of the instructor; and are **NOT** a requirement for student absences. If a student contacts instructor about an emergency situation directly, it is not necessary to involve the Division of Student Affairs as arrangements are made to resolve the absence.

For non-emergency absences, students should inform their instructors directly.

ACCESS TO STUDENT WORK

Copies of your work in this course including copies of any submitted papers and your portfolios may be kept on file for institutional research, assessment and accreditation purposes. All work used for these purposes will be submitted confidentially.

UNIVERSITY POLICY ON WEATHER AND EMERGENCY CLOSINGS

Weather and Emergency closings are announced on Marymount's web site: **www.marymount.edu**, through **MUAlerts**, area radio stations, and TV stations. You may also call the **Weather and Emergency Hotline at (703) 526-6888** for status. Unless otherwise advised by local media or by official bulletins listed above, students are expected to report for class as near normal time as possible on days when weather conditions are adverse. Decisions as to inclement closing or delayed opening are not generally made before 6:00 AM and by 3:00 PM for evening classes of the working day. Emergency closing could occur at any time making **MUAlerts** the most timely announcement mechanism. **Students are expected to attend class if the University is not officially closed.** If the University is closed, course content and assignments will still be covered as directed by the course instructor. Please look for communication from course instructor (e.g., Canvas) for information on course work during periods in which the University is closed.