Course Syllabus
MIS 320 Section C02 – Networks and Security
CRN 44259 – Summer 2020 (6 July to 8 August)
Online: Distance Learning

Instructor Information
Name: Jon Adams
Email: Virtual, via Zoom
Office Hours: By Appointment 12:00PM-1:00PM Fridays
Course Website: https://mymason.gmu.edu

Meeting Time and Place
Time: Online | Synchronous Sessions Fridays 3:00PM, weekly or bi-weekly

Required Prerequisites:
A minimum grade of C in MIS 301, L301, MIS 303, or L303; Students with a class of Freshman may not enroll. Non-Degree level students may not enroll. Students with the terminated from BU major attribute may not enroll.

Required Course Materials
No text purchase is required. Open Educational Materials provided via Blackboard

Course Description: Introduces students to fundamentals of networking technologies and their role in businesses. Emphasis is on understanding the business implications of different networking technologies and solutions. Students learn to identify and understand business requirements and bring together different technical components to design communication solutions. Also focuses on security threats to business network infrastructure and mitigating such threats with business practices combined with technical solutions. Offered by School of Business. May not be repeated for credit.

Course Objectives
• Discuss and introduce computer network architectures and concepts.
• Describe the principles, functions, and standards of communication network
• Explain the OSI 7-layer reference model
• Assess and manage network security related risks
• Apply basic techniques in monitoring network operations and security
• Create, review, evaluate, and refine network security policies and procedures

Mason Core Learning Outcomes:
• Students will understand the principles of information storage, exchange, security, and privacy.
• Students will become critical consumers of digital information; they will be capable of selecting and evaluating appropriate, relevant, and trustworthy sources of information.
- Students can use appropriate information technologies to organize and analyze information and use it to guide decision-making.

**ISOM Learning Goals**
- Students will be able to apply knowledge of information technology and business functions to understand its application in assessing, designing and improving business processes.
- Students will develop data organization, storage and processing solutions to support organizational needs for information management. They will also have the option of developing skills in supporting decision making through business intelligence solutions.
- **Students will use knowledge of computer networks as part of the IT solutions for improving business processes. They will also have option of developing more advanced skills in the areas of network and security.**
- Students will effectively manage information technology projects.
- Students will understand the overall systems development life cycle and be able to recommend IT system solutions accordingly. They will also have option of learning appropriate development tools to develop prototype of IT solutions for business management.

**Important Logistics Information:**
- The schedule in the syllabus is subject to change at the instructor’s discretion.
- Check email and Blackboard often for regular updates to class activities.
- Please allow **up to 24 hours** for a response to e-mail or blackboard messages. This includes scheduling office hours.
- Unfortunately, E-mail sent from non-GMU email addresses cannot be acknowledged nor responded to (FERPA). Use official channels (GMU Email/Blackboard) can be used.
- **Policy on Electronic Devices: Now OBE by transition to online course delivery; Please turn devices on silent/vibrate or mute your call during live class sessions**

**Grading:**
- Student-submitted assignments are solely posted on and submitted through Blackboard.
- **Late homework is accepted up to 2 days after the due date. Late assignments are subject to a score deduction of up to 10 points. In order to turn in late work without penalty the following must be true:** student informs instructor in advance of a valid reason (instructor’s discretion) and receives approval or student provides documented proof (instructor’s discretion) of an emergency precluding prior notice and on-time submittal.
- **Grade review:** Students may request review (at instructor discretion) of grades only within 2 days of the day the graded assignment is returned.
- **Exams (2):** Each exam is not cumulative and covers ½ the course. Each will include materials covered in lectures, the texts, and other readings. You will have 2 hours to complete each exam once you begin. The exam will consist primarily of short essay questions with a few other question types included. The **final exam will be due at 11:59PM on Friday, August 7th 2020.**
- **Quizzes (2):** Each quiz will consist of approximately ten questions based on the lectures, textbook, and required readings. These are open-book. You will have 30 minutes from the start to complete the quiz. **Quizzes will be due at 11:59PM on Sundays.**

- **Homework (4):** Instructions for HW will be posted on BB. The top 3 scores will be counted. Homework is due at **11:59PM on Sundays.**

- **Participation (4):** You will earn participation credit for participation in online discussion. Your discussion will be graded based upon the rubric, which looks to quality, timeliness, responsiveness, and moving the discussion forward. Discussions will run from **Monday to Sunday,** after which discussion postings will not count. **Forums will be closed at 11:59PM on Sundays.**

### Grading Policy: Instructor reserves right to adjust scoring for assignments

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Value</th>
<th>Semester Grade Scale</th>
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</thead>
<tbody>
<tr>
<td>Exams (2x200)</td>
<td>40%</td>
<td>A 93% to 100%</td>
</tr>
<tr>
<td>Homework (4x50)</td>
<td>20%</td>
<td>A- 90% to 92.99%</td>
</tr>
<tr>
<td>Quizzes (2x100)</td>
<td>20%</td>
<td>B+ 87% to 89.99%</td>
</tr>
<tr>
<td>Participation (4x50)</td>
<td>20%</td>
<td>B 80% to 86.99%</td>
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**Inclement Weather and Other Emergencies:** Class will be cancelled when the campus is closed, either due to inclement weather or other situations. Please check GMU website for up-to-date information. Please register **Mason Alert** so that you can receive timely emergency notifications and warnings. In the event of a cancellation, make sure to check email and Blackboard for instructions – there will be an alternate class activity.

**Course Schedule (Subject to change @Instructor Discretion)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 6-12</td>
<td>Syllabus / The OSI Model (Meyers Ch. 2) Cabling and Topology (Meyers Ch. 3)</td>
<td>HW 1 (due July 12; 11:59PM) Discussion Forum Topic</td>
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<td>July 13-19</td>
<td>Ethernet (Meyers Ch. 4 – Ch. 5) TCP/IP (Meyers Ch. 7) Routing (Meyers Ch. 8) Exam Recap</td>
<td>HW 2 (due July 19; 11:59PM) Discussion Forum Topic Quiz 1</td>
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<td>July 20-26</td>
<td>Network Naming (Meyers Ch. 10) IPv6 (Meyers Ch. 13) Wireless Networking (Meyers Ch. 15) Exam Recap</td>
<td>HW 3 (due July 26; 11:59PM) Discussion Forum Topic Exam 1 (Week1 + Week2)</td>
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<td>July 27-August 5</td>
<td>Cybersecurity (Meyers Ch. 11 + 18-20) Cloud Computing &amp; Virtualization (Ch. 16) Course Recap</td>
<td>HW 4 (due August 5; 11:59PM) Discussion Forum Topic Quiz 2</td>
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<tr>
<td>August 7</td>
<td>Final Exam</td>
<td>Exam 2 (Week 3 + Week 4)</td>
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Key Dates – Adjusted for Corona Virus/COVID-19 Pandemic

- First Day of Class: Mon, 6 July 2020
- Last Day to Add/Drop: Wed, 8 July 2020
- Last Day to Drop 50% Liability: Tues, 14 July 2020
- Withdrawal Period: Wed, 15-20 July 2020
- Last Day of Class: Wed, 5 August 2020
- Exam Period: Thu, 6-8 August 2020

Technology Requirements

**Hardware:** You will need access to a Windows or Macintosh computer with at least 2 GB of RAM and access to a fast and reliable broadband internet connection (e.g., cable, DSL). A larger screen is recommended for better visibility of course material. You will need speakers or headphones to hear recorded content and a headset with a microphone is recommended for the best experience. For the amount of Hard Disk Space required taking a distance education course, consider and allow for:
1. the storage amount needed to install any additional software and
2. space to store work that you will do for the course.

If you consider the purchase of a new computer, please go to [Patriot Tech](https://patriot.gmu.edu) to see recommendations.

**Software:** Many courses use Blackboard as the learning management system. You will need a browser and operating system that are listed compatible or certified with the Blackboard version available on the [myMason Portal](https://my.gmu.edu). See supported browsers and operating systems. Log in to [myMason](https://my.gmu.edu) to access your registered courses. Some courses may use other learning management systems. Check the syllabus or contact the instructor for details. Online courses typically use [Acrobat Reader](https://get.adobe.com/reader), [Flash](https://www.adobe.com/products/flashplayer), [Java](https://www.oracle.com/java/), and [Windows Media Player](https://www.microsoft.com/), [QuickTime](https://www.apple.com/quicktime) and/or [Real Media Player](https://www.rsmart.com). Your computer should be capable of running current versions of those applications. Also, make sure your computer is protected from viruses by downloading the latest version of Symantec Endpoint Protection/Anti-Virus software for free [here](https://www.symantec.com/). Students owning Macs or Linux should be aware that some courses may use software that only runs on Windows. You can set up a Mac computer with Boot Camp or virtualization software so Windows will also run on it. Watch [this video](https://www.youtube.com/watch?v=dQw4w9WgXcQ) about using Windows on a Mac. Computers running Linux can also be configured with virtualization software or configured to dual boot with Windows.

The only required software in this course is Wireshark. It is free, download links, instructions and walkthrough will be provided.
**Note:** If you are using an employer-provided computer or corporate office for class attendance, please verify with your systems administrators that you will be able to install the necessary applications and that system or corporate firewalls do not block access to any sites or media types.

**Course-specific Hardware/Software**
Check the syllabus for your course or contact the instructor prior to the start of the course to find out about specific technical requirements for your class. Hardware or software required for your course or program may be available for purchase at Patriot Computers (the University’s computer store that offers educational discounts and special deals).

**Disability Accommodations:** If you are a student with a disability and you require academic accommodations, please see me and contact the Office of Disability Services (ODS) at (703) 993-2474 (http://ods.gmu.edu/), at the beginning of the semester. All academic accommodations due to disability must be arranged through the ODS and should be made during the first two weeks of the semester.

**Academic Integrity:** GMU is an Honor Code university; all students are responsible for knowing and following the GMU Honor Code Statement: "Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work."

In the event of a violation of the GMU Honor Code, the violating student will be reported to the GMU Honor Committee. Another aspect of academic integrity is the free play of ideas. Discussions are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. Please refer to http://honorcode.gmu.edu for further details. When in doubt (of any kind), please ask for guidance and clarification.


As a student, you are responsible for upholding these standards for this course. It is your responsibility to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. In your work on all written assignments, keep in mind that you may not present as your own the words, the work, or the opinions of someone else without proper acknowledgement. You also may not borrow the sequence of ideas, the arrangement of material, or the pattern of thought of someone else without proper acknowledgement. Faculty are obligated to submit any Honor Code violations or suspected violations to the Honor Committee without exception. Any suspected case of honor code violation will be reported to the Office of Academic Integrity immediately. In such a case, I will withhold from grading your assignments until after the case is cleared by the Office of Academic Integrity. All students are expected to adhere to this code. All acts of academic dishonesty will be dealt with in accordance with the provisions of this code.