COEN 4800 – Networks and Security
Fred J. Frigo, Ph.D.
Spring 2025

Course Description:
A variety of relevant topics are discussed, including communication network architecture, networking protocols, error control, media access control, routing, addressing, congestion/flow control, TCP and UDP, cryptography, authentication and VPNs.

Course Learning Outcomes:
We will explore fundamental networking principles, protocols, and architectures with emphasis on cybersecurity requirements to protect computer networks and systems from harm, theft, and unauthorized use. The goal of homework and projects will be to gain a deeper understanding of the ideas and concepts of this course through actual implementation in such areas as: network configuration, TCP/IP, firewalls, encryption, certificates, SYSLOG, OpenSSL, TLS, SPLUNK, Wireshark, etc.

Location & Schedule:
Class meets on Tuesdays & Thursdays: 5:00pm-6:15pm

Grading:
Homework and Projects: 60%
Mid-term exam: 20%
Final exam: 20%

Recommended Texts:
William Stallings, Lawrie Brown, *Computer Security - Principles and Prac*tice, 4th edition, 2018.
ISBN: 9780134794105

Douglas E. Comer, *Internetworking with TCP/IP Volume One*, 6th edition, 2013.
ISBN: 9780136085300

Other Notes:
Students are required to comply with all policies outlined in the Undergraduate Bulletin, including the Marquette University Honor Code and Honor Policy. Attendance is required. Excessive unexcused absences may result in grade of 'WA' or 'WF'.

Office Hours:
By appointment; using Microsoft Teams or in-person Haggerty Hall – Room 235

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