Integrating Cybersecurity Across Any Discipline

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2025 CAE Community Symposium

Agenda:

- Manage Expectations
  - Assumptions and Limitations (You have to try it! That is it!)
  - Common Definitions / Verbiage
  - Different Lenses that can be used
  - Simple Concept
  - Examples
  - Application of the concept – let's do it!

Assumptions & Limitations:

None! This is simple and works in any discipline.

Definitions:

- Cybersecurity
  - Assume agreement as to what it is
  - Assume agreement that it belongs in every discipline
  - Problem: How to apply cybersecurity to non-cyber disciplines

- Difference between:
  - Infuse
  - Integrate
  - Embed

Different Lenses:

- A Lens is the Context in Which a Subject is Approached

- Offers Perspective

- Creates Scope and Limitations

- Can Make Concepts Easier to Learn and Remember

Cybersecurity for any Topic:

- Need to know Cybersecurity Concepts < OR > the Discipline

- Consider the level of the topic: Entry, Intermediate, Advanced

- What Lens Will be Used?

3 Approaches:

- General
- Triage
- Risk Based

General:

- What is needed in all subjects by all students?
  - Proper Cyber Hygiene
  - Antivirus
  - Antimalware
  - VPN usage
  - Basic Encryption
  - Hashing
  - Social Engineering
- Phishing
- Strong Passwords
- Awareness
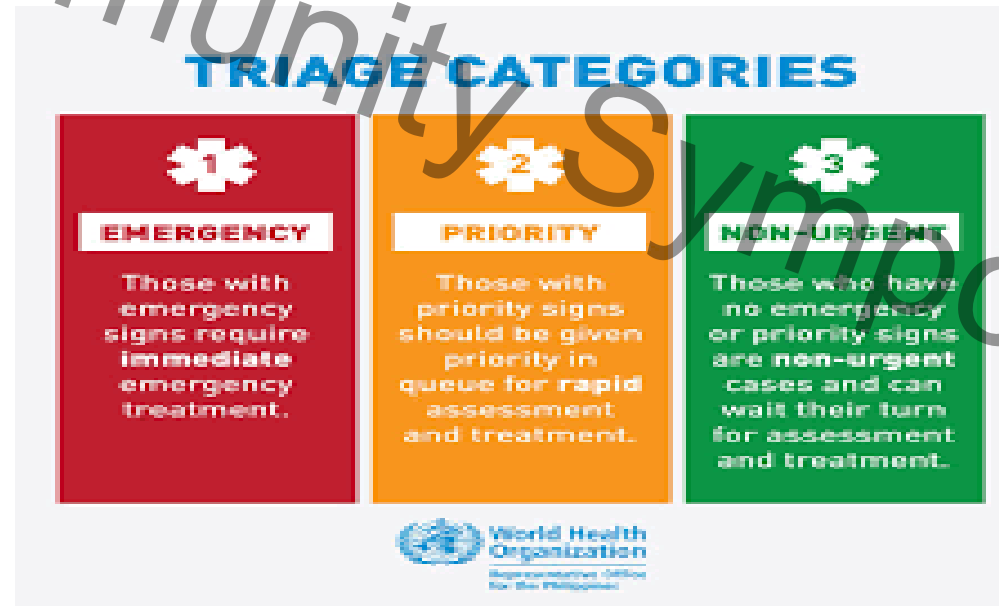- Check Links
- Ethics
- Backups
- Where to Report

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Triage:

- General Concepts

- Course Descriptions and Outcomes as Pointers / Indicators

- Legal Compliance (Can Google it!)

- Most Potential for Loss/Mistakes

Risk Based:

- Identify the hazards

- Determine who/what might be harmed

- Evaluate the risks and suggest precautions (control measures)

- Record and Assess findings

- Review Assessment and Update as necessary

All of the Above!

- General Concepts

- Triage Important Elements

- Risk Based for the rest
  - Can include resources for students to 'Learn More!'
  - Add a test question or discussion point to assess understanding and application
  - Use Intro to Cyber Course in curriculum or write discipline specific content to integrate to the modules

Examples:

Application of the Concept:

- Let's Do It!

- Volunteer a Discipline/Subject/Course
  - (I reserve the right to ask for some information/context!)
  - Here is how to integrate it!

TRY IT NOW!

Questions?

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