# LM 8. Vulnerability Analysis and Penetration Test

### Overview

The module introduces the basics of vulnerability analysis and penetration testing which have the same objective: evaluate the system to identify any security weak points. A vulnerability analysis is usually an automated high-level test searching for potential vulnerability in the system. Penetration testing on the other hand, is more targeted and hands-on process testing and exploit weakness in the system.

Vulnerability analysis and penetration testing is covered in details in IT 6843 Ethical Hacking: Network Security and Penetration.

Vulnerability analysis and penetration testing is a part of Detect phase in the NITS security framework .

### To Do List

* 1. Study the learning material of this module - security frameworks. Use the learning material document and PowerPoint slides as a guide.
  2. Quiz 3 - 10 multiple choice and true/false questions from LM 7 and LM8. Must be **completed by xx.**
  3. Research paper abstract - see Research Paper learning module for details. Must be submitted to the corresponding dropbox **by xx. One submission per team.**

### Learning Outcomes

After this module, student will be able to:

* Describe what is vulnerability assessment and its main benefits
* Explain the steps in the vulnerability assessment process
* Discuss why penetration testing is needed
* Explain the approaches and types of penetration testing
* Compare and contrast vulnerability scan and penetration testing