

## [A-3] COURSE SYLLABUS

Professor's Information			
Name	Vu Duy Hien		
Affiliated University	Banking Academy of Vietnam		
Course Information			
Course Name	Foundation of Information Security	Number of Lectures	02
Course Date	Aug, 23 <sup>rd</sup> 2021 ~ Nov, 28 <sup>th</sup> 2021	Course Language	Vietnamese
Keyword	Information Security, Cryptography		
Course Description (100 ~200 words)	<p>This course provides basic knowledge about information security such as threat, risks, common types of network attack, software and web vulnerabilities; method, techniques to secure an information system. Student can be acquired essential skills to implement and control information security solutions including risk analysis and management, identification and authentication methods, application of cryptography in information security, network security solutions such as firewall, IDS, SIEM, VPN, information security management, physical security...</p>		
Course Goals and Objectives (Approximately 100 words)	<ul style="list-style-type: none"> <li>- Understanding the basic knowledge about information security</li> <li>- Having knowledge about threat, risks in information security</li> <li>- Having knowledge about authentication and identity</li> <li>- Having knowledge about security in Linux and Windows systems</li> <li>- Having knowledge about information security using cryptography</li> <li>- Having knowledge about security basics for networking</li> <li>- Understanding about standards, policy and law in information security</li> <li>- Having knowledge about physical security</li> <li>- Being able to identify risks in information security and find out solution to solve</li> </ul>		
Textbook	<p>[1] Computer Security , Dieter Gollman, Wiley, 2011</p> <p>[2] Giáo trình Cơ sở an toàn thông tin, Lê Đình Vinh, Trần Đức Sự, Vũ Thị Vân, NXB Thông tin &amp; Truyền Thông, 2013.</p>		
References	<p>[1] Giáo trình Giao thức an toàn mạng, Nguyễn Quốc Toàn, Hoàng Sỹ Tương, NXB Thông tin &amp; Truyền Thông, 2013</p> <p>[2] Giáo trình Quản trị an toàn hệ thống, Lương Thế Dũng, Cao Minh Tuấn, NXB Thông tin &amp; Truyền Thông, 2013</p> <p>[3] Principles of Information Security, Michael Whitman, Cengage Learning, 2011.</p>		
Course Requirements and Grades	<p><input type="checkbox"/> Class attendance (75%)</p> <p><input type="checkbox"/> Progress Test (greater than or equal to 4/10)</p>		

## Course Calendar

Week	Main Content
Week 1	<p><b>Chapter 1. Information Security Overview</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Basic Concepts</li> <li><input type="checkbox"/> Information Security Attributes</li> <li><input type="checkbox"/> Information Security Terminology</li> <li><input type="checkbox"/> CNNS Model</li> </ul>
Week 2	<p><b>Chapter 1. Information Security Overview</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The components of Information System</li> <li><input type="checkbox"/> Information Security Methods</li> <li><input type="checkbox"/> Principles in Information Security</li> <li><input type="checkbox"/> Secure Information System Development Lifecycle</li> </ul>
Week 3	<p><b>Chapter 2. Threats and Attacks in Information Security</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Risk Category</li> <li><input type="checkbox"/> Social Engineering</li> <li><input type="checkbox"/> Malware</li> <li><input type="checkbox"/> Exploit</li> </ul>
Week 4	<p><b>Chapter 2. Threats and Attacks in Information Security</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Man in the middle attacks</li> <li><input type="checkbox"/> Spoofing</li> <li><input type="checkbox"/> Replay</li> <li><input type="checkbox"/> DoS/DDoS</li> <li><input type="checkbox"/> Advanced Persistent Threat (APT)</li> <li><input type="checkbox"/> Physical and Nature Threat</li> </ul>
Week 5	<p><b>Chapter 3. Identification and Authentication</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Identification and Authentication Definition</li> <li><input type="checkbox"/> Username and Password</li> <li><input type="checkbox"/> Authentication based on password</li> </ul>
Week 6	<p><b>Chapter 3. Identification and Authentication</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Authentication based on cryptography</li> <li><input type="checkbox"/> Other authentication methods</li> </ul>
Week 7	<p><b>Chapter 4. Access Control</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Background</li> <li><input type="checkbox"/> Discretionary Access Control (DAC)</li> </ul>
Week 8	<p><b>Chapter 4. Access Control</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Mandatory Access Control (MAC)</li> <li><input type="checkbox"/> Role-based Access Control (RBAC)</li> <li><input type="checkbox"/> Other Access Control Models</li> </ul>

Week 9	<b>Chapter 5. Cryptography</b> <input type="checkbox"/> Encryption <input type="checkbox"/> Authentication <input type="checkbox"/> Digital Certificate and PKI
Week 10	<b>Chapter 5. Cryptography</b> <input type="checkbox"/> Communication Security <input type="checkbox"/> Virtual Private Network (VPN)
Week 11	<b>Chapter 6. Network Security</b> <input type="checkbox"/> Network Security Overview <input type="checkbox"/> Switch Security <input type="checkbox"/> Router Security
Week 12	<b>Chapter 6. Network Security</b> <input type="checkbox"/> Firewalls <input type="checkbox"/> Intrusion Detection <input type="checkbox"/> Network Monitoring
Week 13	<b>Chapter 7. Information Security Management</b> <input type="checkbox"/> ISO 270001 <input type="checkbox"/> Risk Management
Week 14	<b>Chapter 7. Information Security Management</b> <input type="checkbox"/> Information Security Policy <input type="checkbox"/> Law in Information Security
Week 15	<b>Chapter 8. Physical Security</b> <input type="checkbox"/> Access Control <input type="checkbox"/> Physical Environment Security <input type="checkbox"/> Disaster Recovery <input type="checkbox"/> High Availability <input type="checkbox"/> Privilege Management