CSCI 5120 Topics in Information Security
Department of Computer Science
Georgia Southwestern State University
Course Syllabus
Semester Fall 2015

INSTRUCTOR

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TEXTBOOK

<table>
<thead>
<tr>
<th>Author</th>
<th>William Stallings</th>
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<tbody>
<tr>
<td>Title</td>
<td>Cryptography and Network Security: Principles and Practice</td>
</tr>
<tr>
<td>Edition</td>
<td>6th</td>
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<tr>
<td>Publisher</td>
<td>Pearson</td>
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COURSE OUTLINE

The course covers the following topics:

1. Selected topics in Information Security
2. Symmetric ciphers
3. Asymmetric ciphers
4. Data integrity algorithms
5. Network and Internet security
6. Legal and Ethical Issues

CATALOG DESCRIPTION

Complete examination of the issues and problems in providing security for information processing systems, security goals and vulnerabilities, encryption and decryption, secure general purpose operating systems and applications, network security, Digital Signatures and Public Key Cryptosystems, security protocols, etc.
GOALS

The main goal of this course is to make students familiar with a variety of cryptographic algorithms and their applications to the system and network security.

LEARNING OUTCOMES

Upon completion of the course students will be able to

1. Discuss on various aspects of Informations Security
2. Use symmetric ciphers to encrypt/decrypt data.
3. Use asymmetric ciphers to encrypt/decrypt data.
4. Program illustrative example(s) on breaking unreliable cipher (e.g. Caesar algorithm)
5. Use cryptographic data integrity algorithms.
6. Identify threats associated with popular network applications.
7. Discuss on the legal and ethical issues.

REQUIREMENTS

A student must have the following computing environment available:

1. A Windows/Linux/MacOS driven laptop/desktop computer with administrator privilege.
2. Reliable Internet connection.
3. Access to GeorgiaVIEW (D2L).
4. The textbook.
5. Installed most recent version of Java Development Kit.
6. Access to the GSW computer security virtual laboratory.