Information Security – Pam Jensen

Do not figure on opponents not attacking; worry about your own lack of preparation

Minnesota West Community and Technical College
Granite Falls Campus
Goal of the Program

- Entry level Network Administrator
- Entry level IT Security Technician
- Transfer to institution of higher learning
- Complete Industry Certifications
  - Security+
  - A+
  - Network+
  - MCSE
  - Linux+
Focus

- Introduction to computer operating systems and networks
- Goals of security
- Overview of tools and theory
- Practice using security tools and familiarity with what is currently being used
- Learn how to stay updated with technology
Career Options in Information Security

- Office and Business Managers
- Accountants
- Law Enforcement personnel
- FBI, CIA
- Military
- Computer Technology personnel
- Private Investigators
- Self Employed Persons
Lab and Facilities

- All students have laptops
- Lab has 20 computer workstations with removable hard drives
- Microsoft alliance for software
- Network sits behind NAT router
- Online students have lab 2 computers that are networked
- Use VMWare for some applications
- Other software uses trial versions
## Basic Curriculum

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>CST 1111</td>
<td>File Structures</td>
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<tr>
<td>CST 1125</td>
<td>Operating Systems</td>
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<tr>
<td>CST 1135</td>
<td>Unix Operating Systems</td>
</tr>
<tr>
<td>CST 1190</td>
<td>Introduction to Networking</td>
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<tr>
<td>CST 2224</td>
<td>Windows Client/Server Administration</td>
</tr>
<tr>
<td>CST 2310</td>
<td>Information Tech Customer Service</td>
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<tr>
<td>CSCI1102</td>
<td>Introduction to Microcomputers</td>
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## Security Required classes

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CST 1180</td>
<td>Data Security Awareness</td>
</tr>
<tr>
<td>CST 1200</td>
<td>Introduction to Information Security</td>
</tr>
<tr>
<td>CST 1220</td>
<td>Information Security Management</td>
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<tr>
<td>CST 1300</td>
<td>Computer Forensics</td>
</tr>
<tr>
<td>CST 1500</td>
<td>Routers and Switches</td>
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<tr>
<td>CST 2520</td>
<td>Ethical Hacking</td>
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CST 1180  Data Security Awareness

- Introduces the need for information security, including the ethical, legal and professional security issues. The student will learn how to protect their home and office computer from misuse and viruses.

CST 1200  Introduction to Information Security

- Information security management issues
  - authentication
  - virus attacks and prevention
  - Firewalls, intrusion detection and other security devices
  - Labs on securing systems and information
  - Comptia’s Security + exam.

- Prerequisite: CST 1190 Introduction to Networking

This course includes ethical, legal and professional security issues. The student will perform risk assessment, identify secure network design, plan for disaster recovery and create security policies.

**PREREQUISITES** CST 1200 – Introduction to Information Security

CST 1300 Computer Forensics

- The student will use forensic tools to recover information from a computer after an attack. The student will gather information without destroying evidence.
- PREREQUISITES CST1111 – File Structures
- CST 1190 – Introduction to Networking
COURSE DESCRIPTION: Students will study router and switch basics, configure routers, investigate routing protocols, configure switches, develop access lists, and troubleshoot routing technologies.

Prerequisite: CST 1190–Introduction to Networking


LAB SIM: CCNA LabConnection for Cisco Certified Network Associate – Exam #640-801 Course Technology
Many of the tools that we will use are illegal to use on the Internet, on a public or private network without written permission.

You may use these tools in the classroom lab or on your own private network at home.

If you use them on the Internet, public or private network you will be liable for any legal action. You will be dropped from the class and not allowed to retake the class.

Ignorance is not an excuse and you can lose your internet privileges with your Internet service provider, be liable for damages and go to jail.
CST 2520 Ethical Hacking

- This course explores tools that hackers use. The course also covers protecting your systems from unauthorized access. Legal and ethical hacking issues will be discussed.

  - Labs from the CSSIA program

- PREREQUISITES: CST 1200 Introduction to Information Security
<table>
<thead>
<tr>
<th>ENGL1101</th>
<th>Composition I</th>
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<tbody>
<tr>
<td></td>
<td>General Education Electives of 7 credits in Humanities, Social Science, Math, Science, or approved electives</td>
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Security Electives

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CST 1250</td>
<td>Information Security Administration</td>
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<tr>
<td>CST 2230</td>
<td>Novell Netware Administration I</td>
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<tr>
<td>CST 2500</td>
<td>Incident Response and Disaster Recover</td>
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<tr>
<td>CST 2600</td>
<td>Fundamental of Wireless Networking</td>
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Other Electives as approved such as PC Maintenance and Repair
Current Program

- Most students that complete the Computer Support Technician program will complete the AAS
- 9 Security Graduates this year
- 40 full and part time, classroom and online
- All courses have an online component
- Online students must have 2 computers and/or VMWare
Program Future

- Work with the Business Department
  - Security Auditing
- Develop Articulation Agreements with MNSCU institutions
- More Unix/Linux Administration
- Collaboration with other programs
  - Robotics, Accounting, Renewable Energy