Course Title:
INF-267  Network Security

Credits/Hours:
3 credits/3 hours lecture.

Course Description:
This course provides a foundation level course that focuses on securing an enterprise's systems and networks. Topics include email security; web security; system hardening; incident response; public key infrastructure; disaster recovery; basics of cryptography; and methods for combating Spam, securing a server, and preventing denial of service attacks. Prerequisite: INF-160 or INF-170 or permission of the Department Head.

Textbooks and Supplies:
See course outline

<table>
<thead>
<tr>
<th>Student Learning Objectives</th>
<th>Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Understand the purpose and goals of network security</td>
<td>Exam and written exercises</td>
</tr>
<tr>
<td>2. Identify current methods and benefits of network authentication, authorization and auditing</td>
<td>Exam and written exercises</td>
</tr>
<tr>
<td>3. Identify major types of network attacks, malicious code and malware and their countermeasures</td>
<td>Exam and written exercises</td>
</tr>
<tr>
<td>4. Understand industry best practices in securing network services including remote access, web access and email</td>
<td>Exam and written exercises</td>
</tr>
<tr>
<td>5. Understand security threats and technologies associated with wireless and instant messaging technologies</td>
<td>Exam and written exercises</td>
</tr>
<tr>
<td>6. Understand basic concepts in symmetric and asymmetric encryption algorithms and their application in network security</td>
<td>Exam and written exercises</td>
</tr>
</tbody>
</table>

College Competencies:

<table>
<thead>
<tr>
<th>Student Learning Objective:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Technological and Information Literacy – Students will demonstrate computer literacy, and will be able to retrieve, organize and analyze information using both technological and traditional means</td>
</tr>
<tr>
<td>2. Applied Knowledge – Students will demonstrate an understanding of, and apply, bodies of knowledge within and across disciplines.</td>
</tr>
</tbody>
</table>
3. Critical Thinking – Students will actively reflect on, reason about, and form independent judgments on a variety of ideas and information, and use these skills to guide their beliefs and actions.

Course Content:
See course outline

Assessment:
An average of 60% from combined assessment measures is required to demonstrate proficiency in course material.

<table>
<thead>
<tr>
<th>Assessment Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>70%</td>
</tr>
<tr>
<td>Term Paper</td>
<td>30%</td>
</tr>
</tbody>
</table>

Quizzes:
There will be several quizzes, each worth 10 points, given at the beginning of random classes. The quiz material will be based upon the prior lectures and labs. At the end of the semester, the average quiz score will be used as bonus points towards your exam grade. A quiz cannot be made up if missed. A student entering class late, after a quiz has begun, will not be entitled to extra time to complete the quiz. Students entering class after a quiz is completed will not be permitted to take the quiz.

Testing:
Students are required to take examinations on the day and time they are scheduled. If special circumstances require a test schedule adjustment, this must be worked out in advance with the instructor. The highest three exam scores (Exam 1, Exam 2, Exam 3, Optional Cumulative Final) will be used when computing the student's final exam average. If a student misses an exam (except for prearranged circumstances with the instructor) a zero grade will be assigned and the student should plan to take the optional cumulative final.

The instructor can be reached by telephone (see course outline for appropriate phone number), e-mail, or written note left in the Divisional Office (during the day) A-306C or the Evening Office L-113. If there are extreme circumstances (documentation may be required) that prevent a student from taking a test according to the published schedule, use one of the above options to contact the instructor before the next class. An arrangement for a special testing schedule is solely at the discretion of the instructor. A student who waits for the next class session to speak with the instructor will not be accommodated with a special test schedule.

It is the student's responsibility to finish an examination correctly and completely. Therefore, when computer Scantron forms are used as answer sheets, the student must use a Number 2 lead pencil and erase all stray marks completely. The burden of proper erasure is at test taking time. Once the examinations are returned to the students, there will be no grade adjustments made due to inappropriate completion of the response form.

Laboratory Work:
Laboratory assignments are hands-on productions that show the instructor that the student can competently use specified software. It is important that the student attend all lab sessions. The student should read the scheduled assignment in the text prior to coming to lab class.

It is anticipated that students will spend at least 4-hours per week in the free-time computer room perfecting their skills and completing their lab assignments. The lab assignments are required for
grading. They must be submitted as the student enters the lab on the assignment due date, and cannot be handed in late. Certain lab assignments will be given and completed during one lab session. In this case, the student must submit the assignment upon exiting the lab. Laboratory assignments that were not collected before the end of lab must be completed during free time.

Lab assignments cannot be done any time other than when they are scheduled; therefore, the lowest lab grade will be dropped when calculating the student’s final average. The student will not be permitted to pick up where he/she left off during the prior session when entering the next scheduled lab.

**Homework:**
In addition to any homework assignment given during class, it is a **standing assignment** that the student read each chapter of the book prior to its discussion. Following the class discussion, the student should reread the material and work with the exercises throughout the text. It is anticipated that students will spend at least 4-hours per week reading the text and working with the exercises and supplemental resources.

**Policies:**
- Lateness – The roll will be taken at the beginning of class. If the student is not in attendance at that time, he/she will be carried in the roll book as being absent unless the instructor is notified immediately after class. Attendance sheets cannot be adjusted at following class meetings.
- The student must adhere to all college polices. Due to the nature of this course, it is recommended that the student review the policy titled “Acceptable Information Technology Use at Bergen Community College”.
- The use of portable electronic devices such as pagers and cell phones is not permitted while class is in session. Please be sure to silence electronic devices before entering class.
- The use of audio CD or tape players, radios, and college computers to play music during class is prohibited.
- Students are expected to demonstrate listening, reading, note taking, and writing skills. The student will need to take notes during class discussions and understand and follow verbal and written directions. All assignments and correspondence with the instructor (including e-mail) must be well written in full sentence format. Proper paragraph format must be used for all postings to the student bulletin board (if applicable).
- The subject line of all e-mail correspondence to the instructor must contain the course number and section and student’s name. Any e-mail received without this information will not be opened.
- Plagiarism in any form will be treated as a failure to complete an assignment. All work submitted should reflect individual effort by the student.
- In borderline cases that arise in almost every class each semester a student’s attendance, class participation, attitude, and observed effort will be considered in helping to determine the student’s final grade.

If the instructor does not appear after 20 minutes following the scheduled time, students should generate an attendance list. One volunteer member need deliver the list, containing the course title, date, and instructor’s name, to the Evening Office L-113 or to the Divisional Office (during the day) A-306C.

**Additional policy and assessment information may be distributed by individual instructors.**