**Course Title:  IST 160 Fundamentals of Security**

**Course Instructor(s):  Steve Shank/Tatyana Zidarov**

**Programs: Network Administration, Cyber Security, Forensics**

**Expected Learning Outcomes**

- Think critically

- Communicate effectively with both verbal and written forms

- Perform and share cooperatively in team projects

- Review and practice computer and network etiquette and ethics found in working environments

- Administer and troubleshoot a network infrastructure

- Evaluate best practices in security concepts to maintain confidentiality, integrity and availability of computer systems

**Assessment (**How do students demonstrate achievement of these outcomes?)

Satisfactory scores on exams and projects.

Satisfactory scores on exams modeled after industry standard certification exams.  Models are developed from the following certification exams: Security+..

Completion of Security+ lab sim by TestOut.  This includes lectures, labs, and exams.

Participation in class discussion boards.  Each student creates a new thread on the current topic and also comments on another student's thread.

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**Validation (**What methods are used to validate your assessment?)

1.  Approval of Information Systems Technology Advisory Council

Prepared by: Stephen Shank                    1                    December 2015

2. Tests comparable to Industry Standard Certification Exam.

3. Faculty Review

4. CyberWatch approved curriculum

5. National Security Telecommunications and Information Systems Security organization approved HCC security curriculum for standards 4011 and 4013

6. Department of Homeland Security and NSA awarded HCC security curriculum CAE (Center of Academic Excellence) status.

7. TestOut has developed LabSim, a robust, complete solution that allows students to learn tasks in a fully operational simulation. LabSim's online labs give you opportunities to learn valuable hands-on experience with hardware, software, and security labs.

8. Textbook publisher (Pearson) maps content to the CompTIA Security+, an Industry Standard Certification Exam

**Results** (What do the data show?)
Since the 2011 summer semester a total of 174 students have taken IST160 Fundamentals of Security.

147 (85%) of the students completed the course and 141 (82%) were successful.

The grade distribution is as follows:

| | | |
|---|---|---|
| A | 98 | 57% |
| B | 26 | 15% |
| C | 17 | 10% |
| D | 6 | 3% |
| F | 15 | 15% |

There was 0 audit, 1 incomplete and 11 withdrew from the course.

Students successfully participate in the Collegiate CyberDefense Competition (CCDC)

Feedback from students going on to take the CompTIA Security+ exam say the labsim by TestOut is very helpful in passing the exam.

The Advisory group advises to incorporate more practical concepts into the curriculum when possible.

**Follow-up** (How have you used the data to improve student learning?)
82% of students completing course requirements successfully complete coursework


We have selected a textbook that maps directly to the CompTIA Security+ Exam.

Security+ lab sim from TestOut has been updated and added to the curriculum.

Practical hands-on lab assignments continue to be added to the curriculum

Students maintain log reflecting what they learned during week.

Place a greater focus on completing simulated CompTIA Security+ exams.
The Transcender suite of exams is being replaced by the TestOut Domain practice exams for IST 160 students.  These objectives are mapped to the CompTIA Security+ Exam. These exams are to taken at periodically throughout the semester.  The student can monitor their progress.  .


Continue to use the NDG virtual Netlab labs into curriculum.  These labs were developed by the Center for Systems Security and Information Assurance (CSSIA).  The creations of these labs was funded by the National Science Foundation's (NSF) Advanced Technological Education (ATE) program Department of Undergraduate Education (DUE) Award No. 0702872 and 1002746; Center for Systems Security and Information Assurance (CSSIA) is an entity of Moraine Valley Community College.

The equipment and labs are available to students on a 24/7 basis.  This frees up need to maintain specific lab equipment and schedule workers to keep labs open and available during non-classroom hours.


(To do)

TestOut is developing curriculum named Security Pro.  This is mapped to the CompTIA Security+ exam but also includes course management tools that will allow us to track student results on this testing.  Currently CompTIA does not forward test results due to privacy and not all students take the certification exam.

Now that Netlabs has been purchased and generic Security+ labs (MSEC obtained through Moraine Valley Grant) develop customized Security+ exams working with Netlabs administrator. This will allow us to consider to removing the cost of a textbook for students as our Netlabs resource is further developed.


**Budget Justification**
(What resources are necessary to improve student learning?)

PC lab,projection unit, printer

Netlabs
Course Management software
Classroom Management system software