Course Title – Information Technology Security
Course Prefix and Number – ITSY 1342
Department – Computer Science
Division – Technology & Business
Course Type: (check one)
☐ Academic General Education Course (from ACGM – but not in WCJC Core)
☐ Academic WCJC Core Course
☒ WECM course (This course is a Special Topics or Unique Needs Course:  Y  or N)

Semester Credit Hours #: Lecture Hours #: Lab/Other Hours #:  3:2:2

Equate Pay hours for course - 3

Course Catalog Description: Instruction in security for network hardware, software, and data, including physical security; backup procedures; relevant tools; encryption; and protection from viruses.

Prerequisites/Co-requisites – ITSC 1305 and ITSC 1307 and (ITNW 1316 or ITNW 2305)

Prepared by: Donna Schilling  Date: 07-19-2015

Reviewed by Department Head: Donna Schilling  Date: 07-19-2015

Accuracy verified by Division Chair: David Kucera  Date: 8/12/15

Approved by Dean or Vice President of Instruction: Leigh Ann Collins  Date: 3-4-16

Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.
I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction):

Topics Covered:

1. OSI model
2. Computer Security Fundamentals
3. Computer Threats and Vulnerabilities
4. Network Security
5. Encryption
6. Network Defense
7. Backup and Disaster Recovery
8. Security Products and Websites
9. Security Standards
10. Security Policies

Instructional Methods
Lecture
Individual Written and Hands-on Lab Assignments
Exams-Both written and hands-on

II. Course Learning Outcomes

<table>
<thead>
<tr>
<th>Learning Outcomes</th>
<th>Methods of Assessment</th>
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<tr>
<td>Upon successful completion of this course, students will: National Institute of Standards and Technology (NIST) Guidelines and other best practices; develop backup procedures to provide for data security; use network operating system features to implement network security; identify computer and network threats and vulnerabilities and methods to prevent their effects; use tools to enhance network security; and use encryption techniques to protect network data.</td>
<td>All outcomes will be assessed by one or more of the following:</td>
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<tr>
<td></td>
<td>• Assignments and Labs</td>
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<td></td>
<td>• Scored test items pertaining directly to SLOs</td>
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<td>• Online research for articles based on assigned topics in security and student prepared written reports</td>
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<td>• Student Oral presentations</td>
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III. Required Text(s), Optional Text(s) and/or Materials to be Supplied by Student.

- USB Flash Drive
IV. Suggested Course Maximum - 16

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.
- Microsoft Windows 7 (or current version) (64 bit) operating system software for pc (student and instructors)
- Microsoft Office suite for each pc (student and instructors)
- VMWare Workstation 9 (or current version) for each student and instructor
- Norton Antivirus software (current version) for each pc
- Computer (64 bit CPU) equipped with 8 GB RAM or more (running virtual machines), graphics card capable of supporting virtual machines, 19” or better monitor, and removable hard drive (500 GB or better) for each student and same for instructor.
- Instructor’s machine needs 2 network interface cards (one to connect to WCJC network and one to connect to student pcs).
- Cat 5 network cable, RJ-45 jacks and crimper for each student and 2 cable tester
- Router and cables to separate class from WCJC network
- Data projector
- Various security software will be downloaded from internet

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

Students are required to do online research and reading of current topics in security field.

**Course Requirements:**

Quizzes/Homework ................................................................. 0-10%
Labs .......................................................................................... 20-40%
Written Reports ........................................................................... 5-10%
Oral Presentation ........................................................................ 5-10%
Tests and Final Exam ................................................................. 25-50%

**Grading System**

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>100 - 90</td>
<td>A</td>
</tr>
<tr>
<td>89 - 80</td>
<td>B</td>
</tr>
<tr>
<td>79 - 70</td>
<td>C</td>
</tr>
<tr>
<td>69 - 60</td>
<td>D</td>
</tr>
<tr>
<td>and below</td>
<td>F</td>
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VII. Curriculum Checklist

- **Academic General Education Course** (from ACGM – but not in WCJC Core)
  No additional documentation needed

- **Academic WCJC Core Course**
  Attach the Core Curriculum Checklist, including the following:
  - Basic Intellectual Competencies
  - Perspectives
  - Exemplary Educational Objectives

- **WECM Courses**
  If needed, revise the Program SCANS Matrix & Competencies Checklist.