Information Assurance and Security  
Brigham Young University – Hawaii  
Fall 2012 (Sep 10 – Dec 13)  

Asst. Professor Joshua Smith  
http://jsmith.cis.byuh.edu  
j.smith@byuh.edu  
808-675-3388  
GCB 105

(1) Overview

Was it Mr. Plum, in the Observatory, with the Candlestick? Although information assurance & security is not exactly like Hasbro’s famous Clue® game, there are many similarities: information security personnel must be detailed, tenacious, accurate, quick and capable. If not, you lose and the game is over – the bad guys win.

As if information assurance and security wasn’t enough, in an increasingly hyper-connected and “flat” world, old labor standards are insufficient – a College degree, by itself, is inadequate. To succeed you must possess, and effectively demonstrate, the Four C’s:

1) Critical Thinking;  
2) Communication & Collaboration;  
3) Character; and,  
4) Competence.

To this end, IT 481 provides exposure to real-world issues, plus opportunities to understand, develop, and practice key concepts and skills for successful information assurance and security. So, buckle up, prepare for some fun, some work (!), and let’s go.

CREDITS: Three (3)  
CLASS SCHEDULE: TTh 12:10 – 13:40 (GCB 101)  
OPTIONAL LAB SCHEDULE: MWF 08:00 – 09:30 (GCB 101)  
FINAL EXAM: Thu, Dec 13, 13:00 – 15:50  
CATALOG DESCRIPTION: Introduction to information security providing a foundation of computer security concepts, including general security, communication security, infrastructure security, basics of cryptography, and operational and organizational security. Prerequisite(s): IT 280/L

REQUIRED TEXT:  

SUPPLEMENTARY READINGS:  
(2) BYU–Hawaii Vision & Mission

*Brigham Young University–Hawaii* . . . exists to assist individuals in their quest for perfection and eternal life and in their efforts to influence the establishment of peace internationally.  *BYU–Hawaii Vision*

To integrate both spiritual and secular learning, and to prepare students with character and integrity who can provide leadership in their families, their communities, their chosen fields, and in building the kingdom of God.  *BYU–Hawaii Mission*

The Vision and Mission are the “why” and “what” – why BYU–Hawaii exists, and what it seeks to accomplish. But “how” – how will we, collectively, achieve those lofty standards?

(3) Framework for Student Learning

The *Framework for Student Learning* is a powerful tool designed to empower us to rise to President McKay's Vision and realize our shared Mission to Learn, Lead, and Build.

As we **Prepare**, **Engage**, and **Improve**, we will maximize our learning, which occurs best when we are:

1) *Motivated by faith, guided by the Holy Spirit, and centered on serving God*;
2) *Active in the learning process*;
3) *Self-directed and take responsibility for our learning*;
4) *Engaged in meaningful reflection and self-assessment*;
5) *Open to changing how we think, feel, and act*; and,
6) *Constantly improving our capacity to study and learn effectively*. 
(4) Expectations, Policies, & Grading

You will keep an activity log to record questions, ideas and insights, suggestions for class or exercise improvements, general comments, and an attendance record. There will be occasional, unannounced checks of your activity log. You will submit your log (or a photocopy) at term conclusion.

In-class time will rarely be used to regurgitate information from the text; you are expected to finish assigned readings BEFORE class and bring questions (or submit via Canvas beforehand). This requires that you (and I!) Prepare. Class time will be focused on clarifications, discussions, answering questions, and hands-on exercises. This is where you (and I!) Engage. Your activity log will be a useful tool to facilitate meaningful self-reflection and assessment, and to improve the course, especially for future students. This is where you (and I!) Improve. Does this look familiar?

Class begins promptly at 12:10. The penalty for tardiness is: $3.00, or 3 BYUH Bucks, or a 3% participation deduction. “Better late than never” is valuable as maxims go, but “best never late” is, well, best! The penalty for an unexcused absence is: $10.00, or 10 BYUH Bucks, or a 10% participation deduction. Penalties apply EACH occurrence. Funds collected will be used for a class party or donated to a charity.¹ If nobody is late or absent the entire Term, Brother Smith will (a) hold a class party, and (b) give a 10% bonus on the final, if applicable. Students never tardy or absent will be entered into a drawing for a “fabulous” prize.

No alternate final exam date or time is permitted, and late assignments are accepted ONLY with the appropriate number of BYUH Bucks - NO EXCEPTIONS. Opportunities for extra credit may be available and students may recommend others. Grades will be updated in Canvas promptly, after items are graded.

Bro. Smith agrees to Prepare, Engage, and Improve. What about you, will you commit to Prepare, Engage, and Improve, also? You are primarily responsible! Poor use of the Framework will reduce individual and class learning. 😊

Graded assignments include: weekly “Triple R’s”, labs, exams, quizzes, videos, and participation. The final grade is weighted as follows: Participation & Activity Log (20%), Quizzes (15%), Triple R’s (15%), Exams (25%), and Labs (25%)

(4.1) Alternate Syllabus

Subject to Brother Smith’s approval you may create an alternate syllabus; it must satisfy the same learning outcomes in Section (6) and be approved before Sep 21st. In the absence of an approved, signed, and filed alternate syllabus, you are subject to the terms and grading as outlined in this syllabus.

¹This is a standard industry practice, particularly for Agile (SCRUM) development projects.
(5) University Policies

The first Dress and Grooming violation will be penalized 15 BYUH Bucks or a 15% participation deduction; subsequent offenses will be reported to the Office of Honor and will incur dismissal from class (tardy or absence penalties applied). All other Honor Code violations will be reported immediately and handled individually.

(5.1) Academic Honesty

Plagiarism, fabrication or falsification, cheating, and other academic misconduct.

(5.2) Dress and Grooming

Men. A clean and neat appearance should be maintained. Shorts must cover the knee. Hair should be clean and neat, avoiding extreme styles or colors, and trimmed above the collar leaving the ear uncovered. Sideburns should not extend below the ear-lobe. If worn, moustaches should be neatly trimmed and may not extend beyond or below the corners of mouth. Men are expected to be clean-shaven and beards are not acceptable. (If you have an exception, notify the instructor.) Earrings and other body piercing are not acceptable. For safety, footwear must be worn in all public places.

Women. A modest, clean and neat appearance should be maintained. Clothing is inappropriate when it is sleeveless, strapless, backless, or revealing, has slits above the knee, or is form fitting. Dresses, skirts, and shorts must cover the knee. Hairstyles should be clean and neat, avoiding extremes in styles and color. Excessive ear piercing and all other body piercing are not appropriate. For safety, footwear must be worn in all public places.

(5.3) Special Needs

Brigham Young University Hawaii is committed to compliance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973. The university makes every effort to accommodate individuals with disabilities within the scope of existing laws.

(5.4) Sexual Harassment

Unlawful Sexual Harassment is contrary to the teachings of The Church of Jesus Christ of Latter-day Saints, the university's Honor Code and applicable civil rights laws and regulations. BYUH’s Honor Code requires that university personnel and students abide by Title VII of the Civil Rights Act of 1964 and Title IX of the Educational Amendments of 1972 which prohibit sexual harassment.
(6) ABET & WASC Learning Outcomes

Information technology, including the Internet, has emerged as one of the critical infrastructures, if not the most critical infrastructure, of modern organizations. Within any organization where you work, you will be touched by information systems and related technologies in various different roles: end-user, developer, or manager. Your ability to understand and use the right technology tools to safeguard information is an important prerequisite for successful performance in your workplace. This course provides the knowledge you need to understand the role of information assurance and security in modern organizations. After completing the course, students will be able to:

- Identify and prioritize information assets;
- Identify and prioritize threats to information assets;
- Define an information security strategy and architecture;
- Plan for and respond to intruders in an information system;
- Describe legal and public relations implications of security and privacy issues;
- Present a disaster recovery plan for recovery of information assets after an incident.
(7) Calendar

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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
<th>Assignment Due</th>
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<tbody>
<tr>
<td>September</td>
<td>Introduction</td>
<td>Chapter 1</td>
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<td></td>
<td>Intro Info. Sec.</td>
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<td>RRR-01; HWV-01</td>
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<td>Week 02</td>
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<td>Quiz 01</td>
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<td>Week 03</td>
<td>Need for Info. Sec.</td>
<td>Chapter 2</td>
<td>RRR-02; HWV-02</td>
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<td>Quiz 02</td>
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<td>October</td>
<td>Info. Sec. Issues</td>
<td>Chapter 3</td>
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<td>Quiz 03</td>
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<td>Week 05</td>
<td>Risk Management</td>
<td>Chapter 4</td>
<td>RRR-04; HWV-04</td>
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<td>Quiz 04</td>
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<td>Week 06</td>
<td>Security Planning</td>
<td>Chapter 5</td>
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<td>Quiz 05</td>
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<td>Week 07</td>
<td>Firewalls &amp; VPNs</td>
<td>Chapter 6</td>
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<td>Quiz 06</td>
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<td>Week 08</td>
<td>IDS, Prev., &amp; Others</td>
<td>Chapter 7</td>
<td>RRR-07; HWV-07</td>
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<td>Quiz 07</td>
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<td>Thu 1st – Wed 7th</td>
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<td>Testing Center</td>
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<td>Chapters 1-6</td>
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<td>Week 10</td>
<td>Cryptography</td>
<td>Chapter 8</td>
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<td>Week 11</td>
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<td>Chapter 9</td>
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<td>Implement Info. Sec.</td>
<td>Chapter 10</td>
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<td>Quiz 10</td>
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<td>December</td>
<td>Sec. &amp; Personnel</td>
<td>Chapter 11</td>
<td>RRR-12; HWV-12</td>
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<td>Info. Sec. Maint.</td>
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<td>GCB 140, 19:00 – 21:50</td>
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<td>COMPREHENSIVE FINAL EXAM</td>
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<td>Submit Activity Log</td>
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Legend

“RRR” Read, Reflect, Report weekly assignment
“V” Video Assignments
“Q” Quiz
“LAB” Hands-on Lab Assignments

Activity Log Record of course work, questions, insights, “ah-ha!” moments, etc.

See Canvas for information for each item
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CLASS SCHEDULE: TTh 12:10 – 13:40 (GCB 140)

Student Acknowledgement

I have reviewed the course syllabus for IT 481 and understand what is required for this course, including:

- I must be an active learner, which occurs as I Prepare, Engage, and Improve. I will demonstrate that, in part, by daily updates to my activity log;
- The due dates for assignments, that late work is accepted only with the proper number of BYUH Bucks;
- Tardiness incurs a $3.00, or 3 BYUH Bucks, or 3% participation penalty EACH occurrence;
- Unexcused absences incur a $10.00, or 10 BYUH Bucks, or 10% participation penalty EACH time;
- Dress and Grooming Honor Code Violations will incur a 15 BYUH Bucks or 15% participation penalty on the FIRST occurrence. Subsequent violations will be reported to the Office of Honor, and I will be dismissed from class until I resolve the problem(s), and will incur the late (if I return the same class period) or absent penalty when dismissed;
- All other Honor Code violations will be immediately reported and appropriate action will be taken, up to and including an automatic failing grade “F” for the semester;
- I am committed to work hard and do my very best in IT 481 and will promptly contact the professor, Brother Smith, if I have any questions or problems related to the course work or my group work; and,
- I will come with a positive attitude, prepared to work, learn, and have fun.

_______________  _______________________
Printed Name                Signature

____________________________
Date