Computer Hardware & Systems Software
Brigham Young University – Hawaii
Fall 2011 (Sep 14 – Dec 16)

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GCB 105

(1) Overview

How does a computer work? Sure, there's electricity, a monitor, mouse, keyboard et cetera, but how does it all \textit{really} work? Want to know? Come discover!

IT 224 will enable you to identify hardware components, perform essential diagnostics and repairs, troubleshoot system failures, and critically evaluate various software solutions. The course will NOT cover more detailed information like hardware chip design, “logic gates,” or manufacturing techniques.

(2) Course Information

\textbf{CREDITS:} Three (3)
\textbf{CLASS SCHEDULE:} MWF 08:40 – 09:40 (GCB 140)
\textbf{LABS:} Tue 21:00 – 23:00; Wed 17:00 – 19:00; Thu 19:00 – 21:00; (GCB 101)
\textbf{FINAL EXAM:} Thu, Dec 15, 09:00 – 10:50
\textbf{CATALOG DESCRIPTION:} Introduction to computer operating systems, graphical and command line user interfaces, hardware and software installation, utility programs, software integration, and diagnostic techniques.

\textbf{REQUIRED TEXT:}
\textit{All-In-One CompTIA A+ Certification Exam Guide}, Mike Meyers. McGraw Hill, 7\textsuperscript{th} ed., 2010. ISBN: 978-0-07-170133-4 ($20 rental from CIS Department)
\textit{TestOut A+ Lab Sim}, http://testout.com/products/aplus/a-plus-certification-training.htm (provided without additional cost)

\textbf{SUPPLEMENTARY TEXT:}

(3) Learning Outcomes\textsuperscript{2}

\textsuperscript{1} The A+ 2009 exam was updated for Windows® 7 content. A review of changes is available at http://academic.cengage.com/resource/uploads/downloads/1111317070_257939.docx.

\textsuperscript{2} See Section 7 for ABET & WASC required learning outcomes.
As members of BYU-Hawaii, we affirm that with appropriate preparation, engagement of our faculties, and openness to improvement, we will maximize our education, which learning 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.

Accordingly, assignments and discussions will include specific consideration for our collective preparation, engagement, and continual improvement. Throughout the term we will focus primarily on two learning outcomes:

a) To assemble, maintain, diagnose, and repair personal computers (PC); and,

b) To evaluate, install, configure, maintain, and troubleshoot PC software.

(4) Calendar

You are expected to read the assigned chapter(s) before the date indicated. Expect a quiz for each chapter (24 total) plus six cumulative exams as specified.

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<th>Wk. 10 Nov 14</th>
<th>Wk. 11 Nov 21</th>
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<tr>
<td>MON</td>
<td>Ch 22, 21</td>
<td>Ch 23, 24</td>
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<td>Ch 26, TC Test 4</td>
<td>Ch 13, 18</td>
<td>Ch 19, 20 TC Test 5</td>
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<td>Ch 25</td>
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3 For the interested student, a third learning objective is the CompTIA A+ certification.
4 The specific schedule may vary based off classroom discussions and student interests.
5 We will use supplementary text for all Windows® material, covering Chapters 4, 14, 15, 16, and 17.
(5) Grading

In conformity to our learning outcomes, Brother Smith agrees to come prepared to facilitate learning. However, you are primarily responsible for what learning occurs. Poor preparation to learn will reduce learning and classroom participation.

The lowest quiz and exam (final not included) will be dropped. Graded assignments include: quizzes (23 @ 20pts, 460 total), labs (8 @ 55pts each, 440 total), and exams (4 @ 100pts, final @ 200 pts, 600 total).

Assessment is individual (i.e. no “curve”) and follows the traditional scale below. No late work will be accepted; no alternate exam dates or times will be permitted. For possible score improvement, see Section (3). Govern yourself accordingly.

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(5.1) Alternate Syllabus

Yes, you read that correctly. Subject to Brother Smith’s approval, you may devise an alternate syllabus. Proposals must satisfy the same learning outcomes as listed in Section (3). Brother Smith reserves the right to approve proposed syllabi. Syllabi must be approved by Sep. 27th, 17:00. Contact Brother Smith for specifics.

*In the absence of an approved, signed, and filed alternate syllabus with Brother Smith, you are subject to the terms and grading as outlined in this syllabus.*

(6) University Policies

Violations of University policies or Honor Code will be handled individually per appropriate policy guidelines. You are encouraged to familiarize yourself with the policies and Honor Code requirements.

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6 A grade of “C-“ or better is required for the IT degree.
(6.1) Academic Honesty

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

http://services.byuh.edu/honorcode/Academic_Honesty_Policy;

(6.2) 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. 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.

http://services.byuh.edu/honorcode/Dress_and_Grooming

(6.3) 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.

http://counseling.byuh.edu/special_needs

(6.4) 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.

http://services.byuh.edu/honorcode/CES/Live_a_Chaste_and_Virtuous_Life
(7) ABET & WASC Learning Outcomes

Upon successful completion of IT 224, Computer Hardware & Systems Software, you will be able to:

• Apply knowledge of computing and mathematics appropriate to the discipline and receive appropriate feedback;
• Demonstrate mastery of problem analysis, and identify and define the computing requirements appropriate to its solution;
• Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs;
• Function effectively on teams to accomplish a common goal and receive appropriate feedback;
• Understand professional, ethical, legal, security and social issues and responsibilities;
• Communicate effectively with a range of audiences and receive appropriate feedback;
• Analyze the local and global impact of computing on individuals, organizations, and society;
• Recognize the need for, and an ability to, engage in continuing professional development;
• Use current techniques, skills, and tools necessary for computing practice;
• Use and apply current technical concepts and practices in the core information technologies and receive appropriate feedback;
• Identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems and receive appropriate feedback;
• Effectively integrate IT-based solutions into the user environment; and,
• Understand best practices and standards and their application.