

**Course Title:** Build your Dream Machine:  
Designing a Computer System

**Dates:** July 26 – 31, 2009

**Dates:** July 26 – 31, 2009

**Instructor Name & Title:** Dovel Myers, M.B.A., Senior instructor, Information Systems  
Management

### **Instructor Qualifications:**

Dovel Myers is a specialist in computer networking, hardware, and systems. With 25 years experience in the industry, he is a former lead architect for Motorola. He developed the Networking path in Business Administration. He holds degrees in business, mathematics, computer information systems, and electrical engineering computer science; and is nearing completion of his PhD.

### **Course Description:**

Design your ultimate dream computer. Learn what makes it work, how to choose between different computers and features, what components look like and do. Find where to select and buy the parts; discover what you actually need and what you don't have to spend the money for. Take a computer apart and see what's inside. Get ready for Vista. What hardware do you need to run your software and games on Vista? What are the alternatives to Vista? Hands-on exploration of computer hardware, software, and peripherals.

### **Description of Academic Content:**

- Examination of computer system components and how they interact
- An overview of the different operating systems
- Fundamentals of how to research and design a computer system from its various components and where to acquire them
- Identification of basic terms, concepts, and functions of system modules
- Distinguish between the popular CPU chips in terms of their basic characteristics
- Identification of the categories of RAM terminology, their locations, and physical characteristics
- Explanation of procedures for adding and removing field replaceable modules for both desktop and portable systems
- Differentiate the characteristics of Windows 9x/ME, Windows NT 4.0 Workstation, Windows 2000 Professional, Windows XP, Vista, Linux, and Solaris operating systems
- Detail the steps to perform an operating system upgrade from Windows 9x/ME, Windows NT 4.0 Workstation, Windows 2000 Professional, and Windows XP, Linux and Solaris.
- Identification of procedures necessary to optimize the operating system and major operating system subsystems

- Identification of common symptoms and problems associated with each module and how to troubleshoot and isolate the problems, recognizing common operational and usability problems and how to resolve them
- Interpretation of common error codes and startup messages and identification of the steps to correct the problems
- Lab activities will focus upon analyzing, researching, and designing a computer system to achieve maximum efficiency and effectiveness

**Description of Teaching Strategies:**

Instruction/lecture, hands-on work in specially designed computer laboratory

**Description of Unique Facilities:**

Students will have access to a newly equipped state-of-the-art computer networking lab. Students will be able to examine standalone and networked computers and associated hardware, and explore the components and configuration thereof. All necessary tools provided. Students provide the curiosity.

**Course and Instructor Evaluation Strategies:**

Instructor will evaluate each student individually using the Institute developed "Student Evaluation Form". Instructor will attempt to meet with each student individually to discuss evaluation or mail the evaluation directly to the student after the Institute.

**Measures of Student Learning and Growth:**

Pre and Post tests will be utilized to measure learning. A culminating project (a design detailing a standalone computer or computer network; listing hardware, software, peripherals, capabilities, and special features and the sources and cost for the building thereof) completed on Friday will showcase growth.

**Maximum # of students: 12**

