

IT 1600.001 – Computer Architecture and Systems Software

Utah Valley University

Fall 2014 semester

Instructor

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office hours: Mondays and Wednesdays 12:30pm-2:30pm, Tuesdays 2:30pm-3:30pm
or by appointment.

Online Tools

This course uses Canvas, available through your UVlink account. Please ask the instructor to demonstrate this if you are unfamiliar with Canvas.

Description

Provides a thorough grounding in computer hardware, system software, and contemporary information system architecture. Examines hardware structure, operating systems theory, and systems software as part of a technical foundation for enterprise systems development and IT infrastructure procurement and management.

Objectives

Upon successful completion, students should be able to:

1. Name and describe the hardware and software components of a computer system.
2. Explain the role and function of the various components.
3. Perform necessary file management and configuration tasks.
4. Configure a working computer.

Materials

Systems Architecture, Stephen D. Burd. 6th ed.

ISBN 13: 978-0-538-47433-4

Pre-requisite courses

None.

Accommodations

Students who need accommodations because of a disability should contact the UVU Accessibility Services Department (ASD), located on the Orem Campus, in LC 312. To schedule an appointment, or speak with a counselor, call the ASD office at 801-863-8747, or for Deaf/Hard of Hearing individuals, use the video phone number, 886-760-1819.

Academic Honesty

Academic dishonesty will not be tolerated. The penalty for a first offense is failing grade for the assignment or test, and that assignment or test cannot be redone. The penalty for a second offense is course failure, and you will be reported to the IS&T Department Chair, the dean's office, and Student Advising. Please read the complete "Student Rights and Responsibilities" section in the UVU Catalog. The following statements are derived from that section: "Cheating is the act of using, attempting to use, or providing others with unauthorized information, materials, or study aids in academic work. Cheating includes, but is not limited to, passing examination answers to, or taking examinations for someone else, or preparing or copying others' academic work." Cheating includes copying assignments from another student or using a substantial portion of another student's work as your own work. In other words, if it appears to the professor that the work of two or more students is substantially the same, those students receive a failing grade for that work.

Course Evaluations

UVU is dedicated to providing quality academic experiences for students. Help us identify areas where professors can improve their teaching by participating in the Student Ratings of Instruction (SRI). Your confidentiality is assured. Your feedback is critical to help us improve the teaching and learning at UVU. The online SRIs will be available toward the end of the semester.

Class Policies

Late work – Due dates in this course are very firm. Quizzes turned in after the due date will receive a discount of 25% if turned in after the due date and a discount of 75% if turned in later than one week after the due date.

Attendance – While there is no specific component of the grade based upon attendance, it is crucial to success in this course. Students should plan to attend every class. If you have persistent schedule conflicts then you will find it difficult to succeed in this class. Attendance is taken at each class for record-keeping purposes.

Final exam time and place – The time and place of the final exam is determined by UVU and scheduled before the class begins. You are expected to take the final exam when and where it is scheduled. **Students with documented need for accommodation must make special arrangements with the instructor.** Any other change of the final exam place or time will require the approval of the instructor, then the department chair, then the dean's office.

Changes to class policies – Class policies may be changed during the course of the class. Current class policies will always be available in this document, which is available online. An update of a policy in this document and a verbal announcement in class are considered adequate notice to students of changes to a class policy.

Grading

Homework	21%
Quizzes	28%
Current events: shared topic	6%
Midterm Exam	15%
Final Exam	30%

Grading Scale

Final grades are expressed as letter grades which are calculated using a scale based on the ratio of points earned divided by points possible.

<i>Letter</i>	<i>Points Earned / Points Possible</i>
A	≥ 93%
A-	90% — 92%
B+	87% — 89%
B	83% — 86%
B-	80% — 82%
C+	77% — 79%
C	73% — 76%
C-	70% — 72%
D+	67% — 69%
D	63% — 66%
D-	60% — 62%
E	< 60%

ABET Accreditation

The Information Systems program at UVU is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). In addition, the Information Systems and Technology (IS&T) Department plans to seek accreditation for the Information Technology program in the near future. According to ABET, “accreditation is proof that a collegiate program has met certain standards necessary to produce graduates who are ready to enter their professions” (<http://www.abet.org/why-accreditation-matters/>).

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Course Syllabus and Schedule: Mondays and Wednesdays 2:30pm—3:45pm

Date	Lecture Topic	Graded Work (due)	Reading Assignment (due)
Aug. 25	Course introduction, Ch. 1: Unified Process		
27	Ch. 1: Jobs, certifications, & information sources		Ch. 1
Sept. 1	LABOR DAY – NO CLASSES		
3	Ch. 2: System components	Ch 1: HW & Q	Ch. 2
8	Ch. 2: Software		
10	Ch. 3: Data representation	Ch 2: HW & Q	Ch. 3
15	Ch. 3: Binary/decimal conversion		
17	Ch. 4: Processor technology	Ch 3: HW & Q	Ch. 4
22	Ch. 4: Processor architecture		
24	Ch. 5: Magnetic disks	Ch 4: HW & Q	Ch. 5
29	Ch. 5: Other storage		
Oct. 1	Ch. 6: Interrupt processing	Ch 5: HW & Q	Ch. 6
6	Ch. 6: Buffers and caches		
8	Ch. 7: Input/Output	Ch 6: HW & Q	Ch. 7
13	Review	Ch 7: HW & Q	
15	MIDTERM EXAM: 2:30pm—3:45pm in CS 617		
20	Ch. 8: Data communications		Ch. 8
22	Ch. 9: Computer networks, part 1	Ch 8: HW & Q	Ch. 9
27	Ch. 9: Computer networks, part 2		
29	Ch. 10: Application development, part 1	Ch 9: HW & Q	Ch. 10
Nov. 3	Ch. 10: Application development, part 2		
5	Ch. 11: Operating systems, part 1	Ch 10: HW & Q	Ch. 11
10	Ch. 11: Operating systems, part 2		
12	Ch. 12: File management	Ch 11: HW & Q	Ch. 12
17	Ch. 12: Backup and recovery		
19	Ch. 13: The Internet	Ch 12: HW & Q	Ch. 13
24	THANKSGIVING WEEK – NO CLASSES		
26	THANKSGIVING WEEK – NO CLASSES		
Dec. 1	Ch. 13: Distributed application		
3	Ch. 14: System administration, part 1	Ch 13: HW & Q	Ch. 14
8	Ch. 14: System administration, part 2		
10	Review	Ch 14: HW & Q	
15	FINAL EXAM: 1:00pm—2:50pm in CS 615C		