



CYB-572 Spring 17 IT Audit, Monitoring & Testing

Dates: 01/11-05/09/2017	Time: Online	Location: online
Instructor: Sonja Streuber	Office Hours: MWF 11:30-12:20 and TR 11:00-12:00 in 212 Gellersen	Contact: sonja.streuber@valpo.edu

Introduction



Welcome to CYB-572, IT Audit, Monitoring & Testing! This 3-credit course emphasizes business management issues regarding the security and control of IT and the achievement of value through managed IT processes. Students will gain a working familiarity with CobIT, as well as international standards and good practices such as ISO17799, ITIL, privacy standards, COSO, COCO, Cadbury, King, and Sarbanes-Oxley. Students will also be introduced to control evaluation techniques and a number of the primary references used by IT professionals and IT auditors regarding IT management and control in accordance with ISACA standards.

Learning Objectives

At the end of the course, students will be able to:

1. Provide audit services in accordance with IT audit standards to assist the organization in protecting and controlling information systems.
2. Evaluate whether the necessary leadership and organization structure and processes are in place to achieve objectives and to support the organization's strategy
3. Analyze whether the practices for the acquisition, development, testing, and implementation of information systems meet the organization's strategies and objectives
4. Verify that the processes for information systems operations, maintenance and support meet the organization's strategies and objectives.
5. Confirm whether the organization's security policies, standards, procedures and controls ensure the confidentiality, integrity and availability of information assets

Course Format and Attendance Requirement

This is an online course, which means that you will be participating remotely. It does, however, NOT mean that you can log on only once a week. The goal in an online environment is to learn through constant engagement with the material and by communicating with the instructor and your peers.

The class rhythm is as follows:

- Tuesday by 11:59 pm CST: Answer a discussion question
- Thursday by 11:59 pm CST: Respond to TWO of your peers' posts
- Saturday evening by 11:59 pm CST (or before!): Upload the weekly lab assignment

Required Textbooks & Materials

- Davis, Chris (2011), *IT Auditing: Using Controls to Protect Information Assets*. 2nd ed. McGraw
- Cascarino, Richard E. (2012). *Auditor's Guide to IT Auditing, + Software Demo*, 2nd ed. Wiley. ONLINE eBook at <http://site.ebrary.com.ezproxy.valpo.edu/lib/valpo/detail.action?docID=10534006&p00=auditor%27s+guide+auditing> . This is ONE shared copy for all course participants.
- A laptop computer with administrative rights.

Workload and Grading

This 3-credit course requires significant research and teamwork. You will be completing the following:

- **Attendance & Preparation (10 points per week = 150 total):** Each Tuesday, answer a question in the weekly discussion forum (5 pts). Each Thursday, respond to TWO of your peers' responses (5 pts). **This activity cannot be made up.**
- **Labs (50 points each = 750 total):** Each week contains one lab assignment about a theoretical, practical, or programming problem and will be solved in teams of 2 or 3. Solutions must be posted on Blackboard by 11:59 pm CST on Saturday evening of the week in which they are due.
- **Final Exam (100 points):** The final exam will be a randomized 50-question multiple-choice and multiple-answer exam covering the material throughout the course. It is scheduled for Friday, 05/12/2017 from 10:30 am -11:59 pm CST. You have 60 minutes to complete the exam.

You can earn up to 1,000 points in this course. No extra credit assignments will be given.

Letter Grade Conversion:

>93%: A	90-93%: A-	87-90%: B+	83-87%: B	80-83%: B-	77-80%: C+
73-77%: C	70-73%: C-	<70%: F			

Assignment Submission, Late Work, and Academic Honesty

- **Assignment Submission:** All Assignments must be submitted on Blackboard. **No emailed Assignments will be accepted.**
- **Late Work:** Work is considered late if not posted to Blackboard by 11:59 pm CST of the day on which it is due. **Late work will lose 50% of the grade.**
- **Academic Honesty:** All work you submit for this course must be your own. You may NOT use anyone else's words (from blogs, webpages, purchased solutions, etc.) without giving a clear source citation. If you are unsure, consult <http://www.plagiarism.org/> or the Writing Center. In addition, you must write and sign with your name the following statement on all course work:

I have neither given nor received, nor have I tolerated others' use of unauthorized aid.

For more information about Valparaiso University's Academic Honor Code, case review cycles, and potential penalties, please refer to <http://www.valpo.edu/student/honorcouncil/index.php>

Any work found in noncompliance with the Valparaiso University Honor Code will receive 0 points and be referred to the Graduate School.

Diversity and Inclusion

Valparaiso University aspires to create and maintain a welcoming environment built on participation, mutual respect, freedom, faith, competency, positive regard, and inclusion. This course will not tolerate language or behavior that demeans members of our learning community based on age, ethnicity, race, color, religion, sexual orientation, gender identity, biological sex, disabilities (visible and invisible), socio-economic status, or national origin. The success of this class relies on all students' contribution to an anti-discriminatory environment where everyone feels safe, welcome, and encouraged to engage, to explore, and ultimately, "to embark on a rewarding personal and professional journey" (Pres. Heckler).

Title IX

Valparaiso University strives to provide an environment free of discrimination, harassment, and sexual misconduct (sexual harassment, sexual violence, dating violence, domestic violence, and stalking). If you have been the victim of sexual misconduct, we encourage you to report the incident. If you report the incident to a University faculty member or instructor, she or he must notify the University's Title IX Coordinator about the basic facts of the incident. Disclosures to University faculty or instructors of sexual misconduct incidents are not confidential under Title IX. Confidential support services available on campus include: Sexual Assault Awareness & Facilitative Education Office "SAAFE" (219-464-6789), Counseling Center (219-464-5002), University Pastors (219-464-5093), and Student Health Center (219-464-5060). For more information, visit <http://www.valpo.edu/titleix/>.

Disability Support Services

As part of its mission for its students, Valparaiso University has developed a nondiscrimination policy which identifies its intention to provide a safe and tolerant environment for all, including those with disabilities. Please contact Zebediah Hall, Director of Disability Support Services, at 6496, if you believe you have a disability that might require a reasonable accommodation in order for you to perform as expected in this class. See also <http://www.valpo.edu/disabilityss/>.

Academic Support

To get help, use the [Academic Success Center \(ASC\) online directory](http://valpo.edu/academicsuccess) (valpo.edu/academicsuccess) or contact the ASC (academic.success@valpo.edu) to help point you in the right direction for academic support resources for this course. Valpo's learning centers offer a variety of programs and services that provide group and individual learning assistance for many subject areas. These learning centers include:

- [Graduate Tutoring Lab](#): Serves the academic needs of Graduate students – tutors offer suggestions on organization of papers, assist in research and citations, and help in understanding difficult assignments. Additional one on one tutoring is also available.
- [Writing Center](#): Primarily serves the needs of undergraduate students, but is also available for Graduate students. Writing Consultants provide proofreading and editing assistance for papers and assignments.

Class Cancellations

Notifications of class cancellations will be made through Blackboard with as much advance notice as possible. It will be both posted on Blackboard and sent to your Valpo e-mail address. If you don't check your Valpo e-mail account regularly or have it set-up to be forwarded to your preferred e-mail account, you may not get the message. Please check Blackboard and your Valpo e-mail (or the e-mail address it forwards to) before coming to class.

Schedule

Week	Start Date	Weekly Topic	Readings and Videos (read and watch before Monday)	Due by 11:59 pm CST
1	01/11	Course Introduction MODULE 1: Audit Overview—Building an Effective Internal Audit Function	Davis 1	R: Post S: Response S: LAB_1
2	01/18	MODULE 1: Audit Overview—The Audit Process	Davis 2 Cascarino 7-10	T: Post R: Response S: LAB_2
3	01/23	MODULE 2: Governance Frameworks, Standards, Regulations—Frameworks and Standards	Davis 16 Cascarino 14	T: Post R: Response S: LAB_3
4	01/30	MODULE 2: Governance Frameworks, Standards, Regulations—Regulations	Davis 17	T: Post R: Response S: LAB_4
5	02/06	MODULE 3: Auditing Techniques—Entity Level Controls and Change Control	Davis 3 Cascarino 15	T: Post R: Response S: LAB_5
6	02/13	MODULE 3: Protection of Information Assets—Logical and Applied IT Security	Cascarino 26, 27 Cascarino App. C	T: Post R: Response S: LAB_6
7	02/20	MODULE 4: Auditing Techniques—Data Centers, Storage, and Disaster Recovery	Davis 4, 10 Cascarino 30	T: Post R: Response S: LAB_7
8	02/27	MODULE 4: Auditing Techniques—Virtual Environments and Cloud Computing	Davis 11, 14	T: Post R: Response S: LAB_8
SPRING RECESS 03/04 8 pm CST to 03/20 8 am CST				
9	03/20	MODULE 4: Auditing Techniques—WLAN and Mobile Devices	Davis 12	T: Post R: Response S: LAB_9
10	03/27	MODULE 4: Auditing Techniques—Routers, Switches, Firewalls	Davis 5	T: Post R: Response S: LAB_10
11	04/03	MODULE 4: Auditing Techniques—Web Servers and Web Applications	Davis 8	T: Post R: Response S: LAB_11
12	04/10	MODULE 4: Auditing Techniques—Windows OS, Unix/ Linux	Davis 6, 7 Cascarino, App D, E	T: Post R: Response S: LAB_12
13	04/17	MODULE 4: Auditing Techniques—Databases and Applications	Davis 9, 13 Cascarino, App B	T: Post R: Response S: LAB_13
14	04/24	MODULE 5: Project Management, SDLC, and Risk	Davis 15, 18	T: Post

		Management	Cascarino 11, 20	R: Response S: LAB_14
15	05/01	MODULE 6: IT Service Delivery and Support— Technical Infrastructure and Service-Center Management Course Summary	Cascarino 24-25 Davis 14	T: Post R: Response S: LAB_15
FINAL	05/12 10:30 am -11:59 pm CST	COURSE FINAL as posted by Office of the Registrar at http://www.valpo.edu/registrar/files/2016/11/Final-Exam-Schedule-2017sp.pdf		FINAL

APPENDIX**Student Learning Objectives—Graduate School**

1. Students will understand and practice methods of inquiry and strategies of interpretation within the student's field of study.
2. Students will master the knowledge and skills pertinent to the student's field of study.
3. Students will effectively articulate the ideas, concepts, and methods through written and oral presentation.
4. Students will understand the connection between their knowledge and skills on the one hand and their professional identity, responsibilities, and demands on the other.
5. Students will integrate knowledge and methods of their study with cognates and other disciplines.
6. Students will study, reflect upon, and practice ethical behavior and cultural sensitivity as they relate to professional and personal responsibility.

Student Learning Objectives—Information Technology Program

1. To understand and practice methods of inquiry and strategies of interpretation within the student's field of study.
 - 1A. Students will master several programming environments.
 - 1B. Students will learn to identify and isolate problems.
2. To master the knowledge and skills pertinent to the student's field of study.
 - 2A. Students will acquire an extensive technology related vocabulary.
 - 2B. Students will become comfortable using a wide range of technology environments.
3. To effectively articulate the ideas, concepts, and methods through written and oral presentation.
 - 3A. Students will be taught how to make formal, oral presentations and be required to give 6 such presentations during their program.
 - 3B. Students will write numerous, thorough papers requiring extensive research. They will be required to use the services on the writing center.
4. To understand the connection between their knowledge and skills on one hand and their professional identity, responsibilities, and demands on the other.
 - 4A. Students will understand the implications of legal and professional regulations as they relate to information technology.
 - 4B. Students will study how technology can be made available to people that are traditionally less advantaged.
5. To integrate knowledge and methods of their study with cognates and other disciplines.
 - 5A. Students will learn techniques of modeling data from other disciplines.
 - 5B. Students will study human factors in IT.
6. To practice ethical and cultural sensitivity as it relates to professional and personal responsibility.
 - 6A. Students will examine a wide range of ethical issues related to technology and the potential effects on people and the environment.
 - 6B. Students will explore the relationship between IT and ethnic and cultural diversity.