Course Syllabus

Performance Systems
INST 6570

SALSA HTML   **(http://salsa.usu.edu/SALSA/sgovoczolmcdedhlldmbalfvlmsskn)**

Contact Information

Instructor

R-Jay Wilde
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Course Description

This course provides students with a theoretical and practical foundation for understanding and analyzing people-centered systems that are intended to work together in order to produce a desired output. These systems can involve groups of people and a variety of technologies or material resources, or they can simply be the individual – which is itself a system of knowledge, ideas, and behaviors that are coordinated to produce a desired output. Our overarching goals are to (1) recognize these systems at work and (2) develop means for conceptualizing key aspects of performance systems so that we can ultimately make recommendations to improve them. This course draws from Cognitive Science, Human-Computer Interaction, Interaction Design, and Organizational Theory.

Course Objectives

Students will learn **fundamental principles, generalizations, or theories**

1. Specifically, by the end of the course, should know about the current status of research on how the human mind is understood as producing high quality performance and "choking" under pressure.
2. Students should be able to differentiate between two types of "in-the-head" cognition and explain ways to design supports, artifacts, or representations that can facilitate performance in both types.
3. Students should be able to explain system theories, such as distributed cognition and activity theory, and identify ways in which our thinking in task-contexts is mediated and enhanced by cognitive artifacts.

Students **develop specific skills, competencies and points of view needed by professionals in the field** most closely related to this course

1. By the end of this course, students will be able to identify **manipulable aspects of a real-world human-centered cognitive system**.
2. By the end of this course, students will be able to **perform a basic form of "contextual inquiry" in order to understand components and interactions in a cognitive or performance system** and make recommendations to improve the functioning of that system.

Course Format

Delivery of this course is through weekly campus course meetings and online, through the Canvas learning management system. Each week of the course begins on a Monday, although some assignments may have deadlines on different days of the week.

You can expect the following from the instructor:

1. Weekly overviews or lectures that will aid in your understanding of the course readings.
2. A series of required activities in which you will apply some course content through a small exercise or discussion.
3. Quick responses to requests to meet with the instructor, by phone, in person, or in a virtual conference room. Should there be multiple student requests (at least 1/4 of the class), a formal conference day and time will be scheduled and an announcement encouraging others to participate will be made on the course site.

The instructor can expect the following from the students:

1. Completion of all reading assignments and attention to any presented material and assigned activities.
2. Timely submission of assignments.
3. Active participation, be it through reading group discussions and/or message postings on the course site.

IMPORTANT

Also, please be aware that the lectures and the course readings are complementary – you will need to go over one in order to fully understand the other. You will not be able to succeed in this class if you only watch lectures but skip the readings.

Asking questions about the material

Questions are best asked during class meetings or on an online group discussion board. You will be in a number of small discussion groups throughout the term. The instructor will have access to and be able to respond to questions in the small discussion groups. Questions may also be sent to the instructor directly, via email.

Required textbooks and materials

- Mager, R. F., & Pipe, P. (1997). *Analyzing Performance Problems or You Really Oughta Wanna*. Atlanta, GA: Center for Effective Performance.

- Norman, D. A. (1993). *Things That Make Us Smart: Defending Human Attributes in the Age of the Machine*. Reading, Mass.: Addison-Wesley Pub. Co.

- Rogers, Y., Sharp, H., & Preece, J. (2011). *Interaction design : beyond human-computer interaction* (3rd ed.). Chichester, West Sussex, U.K.: Wiley.

These textbooks are available through the USU campus store and also through online retailers (where they are often less expensive). Throughout the course, the books will be abbreviated using the following: TTMUS – *Things That Make Us Smart,* IntDes – *Interaction Design*, and APP – *Analyzing Performance Problems*.

The course instructor may provide PDFs of additional required readings online, usually through the USU library online course reserves.

Course Requirements

You are expected to check with the course website daily and meet all posted deadlines. You are also expected to follow the order of the assignments listed in each learning module, unless otherwise posted.

1. **Examinations (2), Each worth 15% of final grade.** Throughout the semester, you will take two exams to assess your understanding of the course material. These exams will draw from all of the reading and lectures leading specified for each exam. Because in real life, you will have the luxury of being able to open up your book and check your notes should you need to draw on one of the topics from the class, these exams will also be open book. However, you will have a *strict* time limit, so you should make sure you know and understand the material even if you have resources available.

2. **Major Project. Worth 30% of Final grade.** You will be responsible for completing a contextual inquiry of an actual human-centered system and making a set of recommendations for how to improve that system. This means you must find a site to observe and analyze observations and interviews from that site. You will be expected to prepare a report summarizing the data you had collected, some models or representations of the system structure and the activities that take place, and a set of recommendations to enhance the performance of the system. You can do this project in pairs or individually.

3. **Discussion Group. Worth 20% of Final Grade.** For most weeks, you will be assigned to one or more reading partners in either the online or on-campus course. You are expected to communicate electronically in the available discussion board with one another during the week of the unit and discuss the following with each other: One major point that made a lot of sense (and why), One major point that was really difficult for you to understand (and why). Each person in the discussion group should share, and each person needs to get at least one substantive response from someone else in the group. All discussion group members will receive the same grade each week.

4. **Mini-Assignment Completion (Online) or In-Class Participation (Campus). Worth 20% of Final grade.** There will often be a small activity for each unit that you do either independently or share with the rest of the class. Online students are expected to complete these. Face-to-face students are not to do these except in the rare situation when a face-to-face class meeting is cancelled. For campus students, a form of these activities will be done in class, and your participation in those activities will count toward this portion of your grade.

Assignment submissions should be made in the Canvas submission system.

Late submissions

In order to accommodate the busy lives of students, you may complete an exam up to 1 week late with a 1/5 penalty on your total grade. For example, for an exam worth 100 points, 20 points will be subtracted off of your total grade if it is submitted within 1 week after the deadline. Mini-assignments and reading discussion group posts are not accepted late. However, your three lowest discussion groups and your three lowest mini-assignments will be dropped. **You may not submit the major project late.**

Policies

Plagiarism

As stated in the USU Student Code, plagiarism is "the act of representing, by paraphrase or direct quotation, the published or unpublished work of another person as one's own in any academic exercise or activity without full and clear acknowledgment. It also includes using materials prepared by another person or by an agency engaged in the sale of term papers or other academic materials." Plagiarism is harmful both for the author of the original work and for the plagiarizer. Any individuals involved in plagiarizing work will receive an automatic fail for the assignment or project and will be immediately reported to the university administration.

Persons with Disabilities

Students with documented disabilities who are in need of academic accommodations should immediately notify the instructor and/or contact the Disability Resource Center at (435) 797-2444 and fill out an application for services. Accommodations are individualized and in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1992.

Incompletes

In accordance with University policy, incompletes are not to be given for poor performance. There will be no incompletes given except for conditions beyond the student's control, including:

- Incapacitating illnesses that prevent a student from attending classes for a period of at least two weeks
- A death in the immediate family
- Financial responsibilities requiring a student to alter course schedule to secure employment
- Change in work schedule as required by an employer

Other, *unexpected* emergencies may be considered on a case-by-case basis. Regardless of the cause for the incomplete, appropriate documentation of the circumstance is required for an extension to be considered.

Grading scale

Your grade will be based on the following:

Items	Percentage
Exam 1	15
Exam 2	15
Major Project	30
Discussion Group	20
Mini-Assignments/Participation	20
Total Points	100

Grade	Percentage
A	93 - 100
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

Date	Details	
Fri Jan 23, 2015	**Unit 1: Cognition and Performance Discussion Group** (https://usu.instructure.com/courses/352482/assignments/1811806)	11:59pm
Tue Jan 27, 2015	**Unit 2: Cognition Continued Discussion Group** (https://usu.instructure.com/courses/352482/assignments/1811804)	11:59pm
Sat Jan 31, 2015	**Unit 1: Mini-Assignment on "Choking" (Online Students Only)** (https://usu.instructure.com/courses/352482/assignments/1811805)	11:59pm
	Unit 2: Mini-Assignment on Errors (Online Students Only) (https://usu.instructure.com/courses/352482/assignments/1811814)	11:59pm
Tue Feb 3, 2015	**Unit 3: Things that make us smart group discussion** (https://usu.instructure.com/courses/352482/assignments/1811807)	11:59pm
Sat Feb 7, 2015	**Unit 3: Sharing a representation (Online Students Only)** (https://usu.instructure.com/courses/352482/assignments/1811803)	11:59pm
Tue Feb 10, 2015	**Unit 4: Distributed Cognition discussion group** (https://usu.instructure.com/courses/352482/assignments/1811808)	11:59pm
Sat Feb 14, 2015	**Unit 4: Distributed cognition in everyday life (Online Students Only)** (https://usu.instructure.com/courses/352482/assignments/1811802)	11:59pm

Wed Feb 18, 2015	**Unit 5: Activity theory discussion group** (https://usu.instructure.com/courses/352482/assignments/1811809)	11:59pm
Sat Feb 21, 2015	**Unit 5: Open Activity Theory Discussion (online students only)** (https://usu.instructure.com/courses/352482/assignments/1811801)	11:59pm
Tue Feb 24, 2015	**Unit 6: Gathering user data discussion group** (https://usu.instructure.com/courses/352482/assignments/1811810)	11:59pm
Sat Feb 28, 2015	**Final Project: Groups and project discussion** (https://usu.instructure.com/courses/352482/assignments/1811798)	11:59pm
	Unit 6: Let's make a survey or interview (Online Students Only) (https://usu.instructure.com/courses/352482/assignments/1811800)	11:59pm
Mon Mar 2, 2015	**Human Subjects Training** (https://usu.instructure.com/courses/352482/assignments/1811815)	11:59pm
Tue Mar 3, 2015	**Unit 7: Contextual Inquiry discussion group** (https://usu.instructure.com/courses/352482/assignments/1811811)	11:59pm
Sat Mar 7, 2015	**Unit 7: Watching user-centered design in action (Online Students Only)** (https://usu.instructure.com/courses/352482/assignments/1811799)	11:59pm
Tue Mar 24, 2015	**Unit 8: Group and social interactions discussion group** (https://usu.instructure.com/courses/352482/assignments/1811812)	11:59pm
	Unit 9: Technology mediated discussion group (https://usu.instructure.com/courses/352482/assignments/1811813)	11:59pm
Sat Mar 28, 2015	**Unit 8: How is it for you? (Online Students Only)** (https://usu.instructure.com/courses/352482/assignments/1811797)	11:59pm
	Unit 9: Your use of technology for communications (Online Students Only) (https://usu.instructure.com/courses/352482/assignments/1811796)	11:59pm
Tue Mar 31, 2015	**Midterm Exam** (https://usu.instructure.com/courses/352482/assignments/1811791)	11:59pm
Sat Apr 4, 2015	**Unit 10: Major Project Update** (https://usu.instructure.com/courses/352482/assignments/1811795)	11:59pm
	Unit 10: Performance Discrepancies (Online Students Only) (https://usu.instructure.com/courses/352482/assignments/1811794)	11:59pm
Mon Apr 6, 2015	**Midterm Extra Credit** (https://usu.instructure.com/courses/352482/assignments/1811816)	11:59pm
Tue Apr 14, 2015	**Unit 11: Major Project Update 2** (https://usu.instructure.com/courses/352482/assignments/1811793)	11:59pm
Sat Apr 18, 2015	**Course Eval Extra Credit** (https://usu.instructure.com/courses/352482/assignments/1811818)	11:59pm
Wed Apr 29, 2015	**(ONLINE STUDENTS) Final Project Abstracts and Reflections** (https://usu.instructure.com/courses/352482/assignments/1811792)	11:59pm
	Final Exam (https://usu.instructure.com/courses/352482/assignments/1811790)	11:59pm
	Final Project (https://usu.instructure.com/courses/352482/assignments/1811817)	11:59pm