Course Syllabus

Spring 2016 Course Syllabus

IST 440W – Information Sciences and Technology Integration and Problem Solving (3 credits): Problem-based approach to technology integration by focusing on real-life problems faced by an organization.

Prerequisites: ENGL 202C or ENGL 202D seventh-semester standing (this course is intended for seniors) and the five common course requirements plus at least three of the required courses in an option.

Course Description

This course is the undergraduate capstone for Information Sciences and Technology majors in the Baccalaureate degree. It requires students to work collaboratively in teams of 4-6 students, with each team comprised of students from more than one option and, if possible, more than one campus. Each team is given a significant real-world problem or issue in which information technology is part of the solution. Teams will be expected to manage the project effectively and to communicate its results clearly to a variety of audiences within an organization. Major topics include: review of problem-based and case-based learning; overview of project management practices; assessment of organizational and technical issues posed by the scenario; development and testing of work plans and analysis of options; communication within the group; communication within a management environment; and presentation of results to a variety of audiences inside and outside the organization.

IST students need to understand the organizational and social contexts in which technology functions. Indeed, many technology problems are multi-dimensional--they have an economic dimension, a legal dimension, a human resources dimension, and so on. This course will require students to analyze, evaluate, and test alternative solutions and to weigh their advantages and disadvantages for the organization.

Students will be evaluated in three ways: by the effectiveness of their team's solution of the technical or organizational problem; by the quality of the students' written and oral presentations; and by the quality of their project management and internal communication. A substantial written paper will be required of each student and each time; in addition, each team will also construct a Web-site for sharing results. Other technologies will be used as required by the project. It is expected that membership on teams of students will be drawn from the various options in the Information Sciences and Technology major. At least nine credits (including at least one IST 300-level and one IST 400-level course) in the student's option must be completed before enrollment in IST 440W. This course should be offered every fall and spring semester beginning in the fall semester 2002. It will be taught in sections of 25 and have a total enrollment of approximately 100 per semester.

Course Approach

The sources of information for this course are the readings, lectures, handouts and outside research. Projects will consist of group assignments. Class participation is expected. Students will be provided ample opportunity to develop writing and speaking skills in the completion of assignments and class projects.

Course Objectives and Software

Course Objectives
Upon completion of this course, the student will be able to:

1. Use systems theory to analyze IT-based challenges of people, software and hardware.
2. Identify methods of organizing work to aid in IT development and integration.
3. Compare and contrast different forms of information systems and development approaches.
4. Develop project management, analytical and technical skills to develop system integration plans and complete data integration tasks.
5. In conjunction with a team, develop and complete an appropriate information technology project.

Course Software

Students in IST will benefit by being able to differentiate themselves from the traditional view in computer science of only focusing on computers, and MIS's rather "user-less" orientation. The IST degree is "not the technology itself, not the million bit per second router ..., but rather the effect that that will have on society, on ... individual[s], and on groups making decisions in an organization." As such, no particular software product is specified so as to allow students maximum flexibility in their final project selection choices.

Instructor Contact Information

Please use email for all course communication. Every attempt will be made for the instructor (or a substitute) to respond to email questions within 24 hours. Your instructor and learning assistant for this section is:

- Mike Hills, mkh179@ist.psu.edu:For additional information, visit the instructor profile under the People link.

Materials

Texts: Required, minimum of one per team

- SCR – Systems Analysis and Design. 10th Edition. Shelly & Rosenblatt. Course Technology, Inc, 2013. ISBN: 9781285171340

Assignments & Grading

- The course will be graded in accordance with the following assignments and rubric.

Grading Scale

A	A-	B+	B	B-	C+	C
93-100	90-92.9	87-89.9	83-86.9	80-82.9	77-79.9	70-6.9
930-1000	900-929	870-899	830-869	800-829	770-799	700-769

D	F
60-69.9	<60
600-699	0-599

Assignments	# of Course Assignments	Individual or Team	Points for Each Assignment	% of Total Grade	Total Points
Planning	4	Individual	Potential Projects	2.5%	25
		Team	PDR Update	5%	50
		Team	PDR	10%	100
		Team	PDR Critique	2.5%	25
Analysis	3	Team	User Req't Update	5%	50
		Team	User Requirements	10%	100
		Team	User Req't Critique	5%	50
Implementation	4	Team	Plan Update	5%	50

		Team	Final Deliverable	30%	300
		Team	Plan Critique	10%	100
Discussion	4	Individual	Intro/Team Form	5%	25
		Team	PDR Critique	5%	25
		Team	User Req't Critique	5%	25
		Team	Project Critique	5%	25
Peer Evaluations		Individual	Peer Eval 1	2.5%	25
		Individual	Peer Eval 2	2.5%	25

The following schedule outlines the topics covered in this course, along with the associated time frames, time frames, readings, activities, and assignments. All due dates reflect Eastern Time (ET). Specifying the time zone ensures that all students have the same deadlines, regardless of where they live.

All assignments are due at midnight **Sunday 11:59 AM (ET)** each week, unless otherwise stated.

Week 1

Week 1 Topic(s) Introduction to Systems Analysis and Design

Time frame January 10 to January 17, 2016

Readings

Chapter 1, Introduction to Systems Analysis and Design

Assignments	Planning Input 1 (Identifying Two Potential Project Ideas), Discussion 1, Team Formation

Week 2

Week 2 Topic(s)	Managing Systems Projects
Time frame	January 18 to January 24, 2016
Readings	Chapter 3, Managing Systems Projects
Assignments	Project Definition Report Development

Week 3

Week 3 Topic(s)	Project Definition Report
Time frame	January 25 to January 31, 2016
Readings	Chapter 3
Assignments	Project Definition Report Update

Week 4

Week 4 Topic(s)	Project Definition Report Development
Time frame	February 1 to February 7, 2016

Readings	Chapter 3
Assignments	Project Definition Report Development

Week 5

Week 5 Topic(s)	Project Definition Report
Time frame	February 8 to February 14, 2016
Readings	Chapter 5
Assignments	Final Project Definition Report

Week 6

Week 6 Topic(s)	Project Definition Report Critique
Time frame	February 15 to February 21, 2016
Readings	None
Assignments	Project Definition Report: Critique/Discussion 2 Peer Evaluation 1

Week 7

Week 7 Topic(s)	User Requirements
Time frame	February 22 to February 28, 2016

Readings Chapter 4, Requirements Modeling

Assignments User Requirements Development

Week 8

Week 8 Topic(s) User Requirements

Time frame February 29 to March 6, 2016

Readings Chapter 8, User Interface Design

Assignments User Requirements Update

Week 9

Week 9 Topic(s) No Class, Spring Break

Time frame March 6 to March 12, 2016

Week 10

Week 10 Topic(s) User Requirements

Time frame March 14 to March 20, 2016

Readings None

Assignments User Requirements Report

Week 11

Week 11 Topic(s) Project Implementation

Time frame March 21 to March 27, 2016

Readings Chapter 11, Managing Systems Implementations

Assignments User Requirements: Critique/Discussion 3

Week 12

Week 12 Topic(s) Project Implementation

Time frame March 28 to April 3, 2016

Readings Chapter 11, Managing Systems Implementation

Assignments Project Implementation Development

Week 13

Week 13 Topic(s) Project Implementation

Time frame April 4 to April 10, 2016

Readings Chapter 11, Managing Systems Implementation

Assignments Project Implementation Update

Week 14 Topic(s)

Time frame	April 11 to April 17, 2016
Readings	None
Assignments	Project Information Development

Week 15

Time frame	April 18 to April 24, 2016
Readings	None
Assignments	Final Project Deliverable

Week 16

Time frame	April 25 to April 29, 2016 (5 days)
Readings	None
Assignments	Final Project: Critique/Discussion 4, Peer Evaluation 2

Course Policies and Expectations

- Team work is encouraged in this course. Homework assignments are individual. Labs and term papers are team-based. You should credit persons that have helped by noting the names in the assignments, reports, or papers, and reference to the literature you read.
- Late penalty is 10% per day. Submissions late more than a week are not accepted. Requests for exceptions, with justifications, should be sent in advance to the *grader*.

Resources

Find extensive information and links to resources, including the Penn State library, web conferencing, course tools, writing help, and much more on the **Resources** (Links to an external site.) (Links to an external site.) page.

University Policies

Review current information regarding Penn State policies, including Academic Integrity, Disability Accommodations, Military Accommodations, and many others on the **University Policies** (Links to an external site.) (Links to an external site.) page.