INFSCI 1024 Analysis of Information Systems

Term: Spring 2016

Time: Wednesdays 12:00 – 2:30

Location: Information Science Building, Room 403

Instructor: Dmitriy Babichenko

Instructor's Email: dmb72@pitt.edu

Office Hours:

- Tuesday 3:00 PM - 4:00 PM
- Thursday 3:00 PM - 4:00 PM
- By appointment

Office Address: Room 722, Information Science Building

Textbook: There is no textbook!

Course Description:

This course provides industry-required skills in software development lifecycle management, which is critical for successful IT projects. Topics include:

1. Writing business proposals
2. Eliciting, documenting, verifying and modeling software system requirements using the Unified Modeling Language (UML)
3. Assessing risks associated with software projects
4. Software development lifecycle
5. IT project management
6. Analyzing financial requirements and creating a budget
7. Identifying potential intellectual property hurdles associated with software development projects.

This is an active learning course where students develop an analysis model for a realistic IT project which is subsequently implemented in INFSCI 1025. The analysis and design models and documents are suitable for inclusion in the student's IT portfolio.

Objectives:

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

1. Understand the importance of requirements management in software development process

2. Write software project proposals
3. Collect and document and evaluate user and system requirements
4. Write maintainable and functionally correct use cases
5. Understand the difference between various system prototyping techniques
6. Understand different project management techniques
7. Develop basic understanding of intellectual property and its relevance to information system development
8. Understand the process of presenting to stakeholders

Course Schedule (tentative, subject to change):

Week	Date	Topic(s)	Details
1	1/6	Introduction and overview Project proposal	Introduction to course Course project overview Importance of requirements Getting to know your client Getting to know your project
2	1/13	Software development lifecycle Project proposal	Software development life cycle Request For Proposal (RFP) Writing effective project proposal
3	1/20	**Project proposal elevator pitches**	
4	1/27	Software development methodologies	Waterfall model Agile model Scrum Design and code reviews Continuous integration
5	2/3	Requirements	Collecting requirements Writing requirements documents Elicitation techniques Interviews Questionnaires
6	2/10	Requirements	Interviewing Stakeholders
7	2/17	Requirements	Workshops Storyboards
8	2/24	Introduction to UML	Gentle introduction to UML Use cases Activity diagrams Sequence diagrams
9	**3/2**	**Midterm Exam** ☹	
10	**3/9**	**Spring break** ☺	
11	3/16	Intellectual property	Copyright, patent, trademark
12	3/23	Risk management	Risk management in IT projects
13	3/30	Presenting to stakeholders	Pitching your product Effective presentations/pitches

14	4/6	Budget planning	TBA
15	4/13	IT project management	IT project management techniques Task breakdown Task estimation Learning through iterations
15	**4/22**	**Final presentation**	

Quizzes:

There will be 5-7 short 5-question quizzes throughout the semester. Each quiz will be worth 20 points. All questions will be based on class lectures and reading assignments from the previous week.

Assignments:

- Some of the assignments will be individual and some will be team-based.
- Every team will consist of 4-6 students.
- All assignments must be typed (handwritten submissions will not be accepted). Please put class name (INFSCI 1024) and names of all team members on every submission.
- All assignments must be completed via Google Docs and a shared link to the document submitted to the instructor via CourseWeb
- Unless specified otherwise, the due date for all assignments is the end of the day (11:59pm) BEFORE the lecture.

Late Submissions:

Late submissions will not be accepted without a valid reason (medical issue, death in the family, etc...)

In-Class Electronic Device Policy:

You are **NOT** allowed to use electronic devices (laptops, tablets, phones, etc...) during the lectures. If you need a laptop for an in-class exercise, the instructor will notify you in advance.

Collaboration vs. Cheating:

Collaboration on homework is permitted to an extent. Specifically, students are allowed to discuss the possible solutions to a problem and help each other with logic errors. However, handing your work to someone so that they may see a copy of your solution, or dictating code to a person on line-by-line basis is not within the spirit of the collaboration policy or the honor code of the university.

Grading Policy:

1. Quizzes: 20%
2. Assignments: 50%
    a. Project proposal (team)
    b. Requirements document (team)
    c. Use cases (individual)

    d. Project risk analysis (individual)
    e. Budget (individual)
    f. Final portfolio (team)
3. Midterm Exam: 20%
4. Final presentation: 10% (team)
5. Peer reviews
    a. You will lose 5 points off your assignment grade if you do not complete peer reviews
    b. If peer reviews uniformly indicate that you did not contribute to a team assignment, you will receive a grade of 0 for that assignment.

Grading Scale:

- 93 <= A < 100
- 90 <= A- < 93
- 88 <= B+ < 90
- 82 <= B < 88
- 80 <= B- < 82
- 78 <= C+ < 80
- 72 <= C < 78
- 70 <= C- < 72
- 60 <= D < 70
- F < 60

Academic Integrity:

Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity, from the February 1974 Senate Committee on Tenure and Academic Freedom reported to the Senate Council, will be required to participate in the outlined procedural process as initiated by the instructor. A minimum sanction of a zero score for the quiz or exam will be imposed.

View the complete policy at www.cfo.pitt.edu/policies/policy/02/02-03-02.html

Plagiarism:

In all written assignments submitted in this (and hopefully all other courses) you must properly attribute all text, images, and other media that were not created by you, to the original author. You must use APA citation format for all assignments. If you are not familiar with APA citation format, you can find everything you ever wanted (and did not want) to know about APA here: https://owl.english.purdue.edu/owl/resource/560/01/

All submitted assignments will be analyzed through TurnItIn software. As per the University policy, any instance of plagiarism will result in an automatic grade of zero for the assignment.

Disability:

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact the Instructor and Disability Resources and Services, 216 William Pitt Union, (412) 648-7890 / (412) 383-7355 (TTY), as early as possible in the term. Disability Resources and Services reviews documentation related to a student's disability, provides verification of the disability, and recommends reasonable accommodations for specific courses.