

## **CIS 4296: Syllabus Fall 2016 IS&T CAPSTONE 1 - Systems Analysis and Design**

### **COURSE MEETING TIMES**

Tuesday & Thursday: 3:30 – 4:50 SERC 108 Monday 8:00 – 9:50 Wachman 011
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### **CONTACT INFORMATION**

<b>Section 001</b>
Rose McGinnis
mcginnr@temple.edu
Office hours: T/TH 10-12, M 1-3 in 1810 Liacouras Walk, Room 203F T/TH 10 to Noon in SERC 351
Course Assistants:     Kyler Love - tue94528@temple.edu

### **Course Description**

This course is the first in a two-semester capstone sequence required for all IS&T students. It synthesizes all of the material learned within the required courses and effectively prepares the students to enter the workforce. Students will be assigned to project teams and each will have a unique client for whom they work. These clients will be selected from non-profits or Temple departments who have a clear and definitive need for an Information System. Systems requirements, analysis and design concepts, tools and techniques will be taught, and then the students will apply them to their client projects. Student teams will meet with and interview their clients to understand their requirements, develop an appropriate scope of what can be accomplished, analyze the information system needs and design an appropriate solution. Next semester, in CIS 4396, the student teams will continue working on these projects and will develop the system, test it thoroughly, install it and train the users. Together, these two courses give students experience in the entire Systems Development Life Cycle (SDLC).

At the conclusion of this course sequence, students are expected to have mastered both the professional and technical skills typically required in the IT/computing workplace. Technical knowledge and skills will involve some combination of procedural and object-oriented programming, database technology, software development methodologies, (including analysis, planning, design and implementation, operation, and maintenance). Professional skills should include the development of effective group work capabilities, excellent communication skills, project management skills, as well as presentation design, delivery and discussion. All students completing the capstone sequence should have developed an understanding of appropriate strategies and approaches for effective client-developer interaction and successful software system development.

### **Student Competencies**

By the end of this course, students should be able to demonstrate the following competencies:

- As a Temple-defined 'writing intensive' course, students will be required to submit thorough and complete written reports on all aspects of their work, with requirements for iterative writing assignments. Students will also gain experience in researching using library resources.
- Students will develop strong interviewing and listening skills while working with their clients.

- Students will develop strong presentation skills in giving presentations to the professor and to class, as well as communicating and presenting regularly to their clients.
- Students will use state-of-the art languages/tools. A variety of technologies will be used and discussed, including Object Oriented and Agile methodologies.
- Students will gain experience in actual writing that is done within industry, including all aspects of requirements, analysis and design documents.
- Students will learn to determine systems requirements, analyze systems problems, model potential solutions and design these solutions.
- Students will draw upon the accumulated knowledge gained during their IS&T studies. Depending on the specifics of each project, programming, databases, operating systems, networking, server administration, and security are all components that will relate to this project.

### ***Course Objectives:***

- Learn and apply Information System consulting procedures and techniques.
- Utilize project management techniques to record, report, and monitor progress.
- Create various professional analysis and design client deliverables, including a system vision document, activity diagrams, use cases, domain model class diagrams, database structure, requirements document, screen layouts and system prototype (UI).
- Learn about Waterfall, Object Oriented and Agile systems development, with ability to utilize the best of each in appropriate settings.
- Utilize and develop student writing skills, with requirements for iterative review and rewrite of documents.

### ***COURSE MATERIALS***

- There are no textbooks for this course. Students will be required to do independent research, watch videos and visit websites for course resources.
- You are strongly encouraged to bring a laptop to classes. We also encourage you to start the Bootstrap and Git Hub work early in the semester as these are key pieces of the course and like most new technologies you will work with in the corporate environment, you will be learning most of this at your own pace and style.

### ***COURSE POLICIES***

- Teamwork and professionalism are overarching tenets of everything you do in this class. Both your professor and your client will expect you to deliver what you promise. Do not commit more than you can do as a team. It is always better to under commit and over deliver than to have the opposite situation.
- There will be many assignments which must be handed in and will be graded. **Assignments will not be accepted late regardless of the reason.** There are both individual assignments and group client deliverables.
- Remember that you are working for a client, and due dates are expected to be met. In school and in the business world, estimates and expectations need to be established and met. Professionalism is expected throughout this course and especially in interactions with your client.
- As a writing intensive course, students will be required to develop their writing skills throughout the course. This course will incorporate a number of requirements to emphasize the importance of writing, including

independent research, the integration of a variety of sources, revision, and allocating a substantial amount of your grade on the quality of your writing. Students who feel that they are weak in writing proficiency should go to the Temple Writing Center for help. A key aspect of Temple's writing intensive courses is the use of the revision process and iterative writing, and this will be required in this class.

- Students with special needs: Any student who has a need for accommodation based on the impact of a documented disability, including special accommodations for access to technology resources and electronic instructional materials required for the course, should contact me privately to discuss the specific situation by the end of the second week of classes or as soon as practical. If you have not done so already, please contact Disability Resources and Services (DRS) at 215-204-1280 in 100 Ritter Annex to learn more about the resources available to you. We will work with DRS to coordinate reasonable accommodations for all students with documented disabilities.
- The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities (Policy # 03.70.02) which can be accessed through the following link: <http://policies.temple.edu/PDF/99.pdf>
- Cell phones MUST be turned off in my class.

### **COMMUNICATION OUTSIDE OF CLASS**

My office hours and email are listed above. Email is typically the easiest way to reach me outside of class or my office hours. You need to check Blackboard and your Temple email regularly during the semester. If you do not use Temple's email system, make sure that you forward your Temple emails to whichever one you do use.

### **ORIGINALITY OF WORK and CITING OF SOURCES – YOUR WORK MUST BE YOUR OWN**

Do not cheat in this class. I take this very seriously as does the university!! This includes plagiarism. If you quote someone else's material, you MUST cite it properly. This includes all material taken from the Internet. If you copy work from the Internet or another source, and do not cite it properly, you will fail this course. All of your work must be your own...this includes your homework assignments. Copying or sharing during an exam or quiz, copying homework, copying disks, sharing printed or digital homework files, or any other type of plagiarism in any form is strictly prohibited in this class.

Students should also be familiar with the University statement on academic honesty found at the following link: [http://www.temple.edu/bulletin/responsibilities\\_rights/responsibilities/responsibilities.shtm](http://www.temple.edu/bulletin/responsibilities_rights/responsibilities/responsibilities.shtm)

I also expect you to understand and utilize the proper way to cite sources and utilize reference materials. There are many sites for proper APA or MLA citing – either is acceptable for this class. If you are not familiar with how to do this, you can get useful information from the Temple Writing Center at:

<http://www.temple.edu/writingctr/support-for-writers/handouts.asp>

### **COMMON TYPES OF PLAIGARISM INCLUDE:**

1. Direct copying from internet sources or texts without acknowledgement (not even in the list of references/bibliography at the end).
2. Direct copying in reasonably large quantity from internet sources or texts with citation or bibliography, but without using quotation marks.
3. No citation throughout the essay, with a list of references only at the end. No evidence of direct copying, but evidence of failure to acknowledge source of ideas.

4. Failure to paraphrase properly, leaving the original passages more or less intact, except for the alteration of a few words here and there.
5. Improper acknowledgement of other's work due to incomplete citations or bibliographic references.
6. NOTE: Each of these forms of plagiarism hold true for all work, including papers, presentations, homework, student blogs and student wikis.

### **WITHDRAWAL POLICY**

Students may withdraw at any time as long as it meets university guidelines.

### **TEAM STRUCTURE**

While there are portions of this course that are done as individuals, substantial amounts of this course require group work and collaboration. The instructor will determine the people who will be in each group. Teams may want to assign clear responsibilities to members for work that needs to be coordinated. This is totally up to each team. Teams will need to use a collaboration tool of their choice, such as Google Docs, to coordinate their work. Other tools that will be utilized in class will include Visio (for drawing diagrams) and MS-Project (for maintaining accurate project schedules).

All Team members will be asked to write assessments of each team member's performance and to discuss them with the instructor. This will happen throughout the semester. However, at all times the instructor is responsible for grading.

Teams will remain together for the entire semester of CIS 4296 and in general for CIS 4396. However, some changes may be made to accommodate differences in skill sets, scope and size before CIS 4396.

### **GRADING**

<b>Item</b>	<b>Total Points</b>	<b>Individual/Group</b>
Tests (3)	110	Individual
Individual Assignments (8)	80	Individual
Meeting Agendas and Meeting Minutes (5)	15	Group
Client Deliverables (11)	175	Group
Class Preparedness, Participation, Attendance	20	Individual

#### **TOTAL: 400 points**

Specifics regarding grading:

**Tests:** There will be 3 individual tests during class time. Test 1 is worth 30 points. Test 2 is worth 25 points. Test 3 is worth 55 points. If you miss a test for any reason, you will receive a zero unless you have a valid doctor's note or other verifiable excuse.

**Individual Homework Assignments:** There will often be one, and at times two, assignments to be submitted each week. The requirements will be clearly specified. Points vary by complexity and time requirements of each assignment. Late assignments will not be accepted regardless of the reason. Pay attention to the requirements of each assignment, the due date and the point values. All assignments will only be accepted on the date due by the time specified.

**Meeting Agendas and Meeting Minutes:** These documents are required for each client meeting. The Meeting Minutes will be reviewed by the faculty prior to being sent to the client.

**Group Client Deliverables (referred to as CDs):** The professionalism and completeness of client documents is a critical component of this course. All of the concepts taught in class will then be practiced and utilized in your actual client project. Client deliverables will be done as a group. More weight will be assigned to your preliminary version of these documents as they will require the most time and effort. The final versions are edits and adjustments that will need to be made after our review meetings. This is the iterative review portion of the class.

CD 1	Interview Questions, Meeting Agenda	Prelim=5, Final=5
CD 2	Statement of Work	Prelim=5, Final=5
CD 3	Activity Diagram	Prelim=10, Final=5
CD4	User Stories	Prelim=10, Final=5
CD 5	Use Cases: Diagram and Casual	Prelim=10, Final=5
CD 6	Data Model	Prelim1=10, Prelim2=5, Final=5
CD 7	User and System Interfaces	Prelim1=10, Prelim 2=20, Final=10
CD8	CD Consistency (Use Cases, User Stories, Class Diagram, UI)	Final=20
CD 9	System Requirements Specification	Prelim=5, Final=5
CD 10	Final Presentation	Prelim=5, Dry Run=5, Final=5
CD 11	“The Book” (final versions of all CDs, signoffs and other documents)	5

**Class Preparedness/Participation/Attendance:** You are expected to read the materials and complete the homework assignments prior to coming to class. Attending classes is critical for you to be successful in this course and to participate in all of the group interactions. If you miss class, it is your responsibility to get any work missed and to ensure that any assignments are submitted by the assigned time. More importantly, this course focuses on group work. You are expected to be an active participant in your group throughout the entire semester. Understanding that issues can occur, I will give you up to 2 absences. These are a total both across lab and class. **You will lose 2 points for each class or lab that you miss after the 2 allowable ones, regardless of the reason.**

### **FINAL GRADES**

Final grades will be assigned as follows. Your grade equals **your total points / 400 available points**

Final Grade	Total Points	Percentage
A	368-400	92-100
A-	360-367	90-91
B+	352-359	88-89
B	328-351	82-87

B-	320-327	80-81
C+	312-319	78-79
C	288-311	72-77
C-	280-287	70-71
D	248-279	62-69
F	0-247	0-61