

**CONTACT INFORMATION**

Professor: Wendy Urban  
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Office: SERC 352  
Office Hours: T 10-12, W 9-10:30, TH 10-12 or by appointment  
Class Meeting Times: Monday, 11:00-12:50 SERC 204  
Tuesday/Thursday, 2:00-3:20 SERC 206  
Pre-Req Courses: CIS 4296, CIS 3342  
Course Assistant: Zach Wagner zach.wagner@temple.edu  
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**Course Description**

CIS 4396 is the second in the two-semester capstone sequence required for all IS&T students. It synthesizes all of the material learned within the required IS&T curriculum and effectively prepares the students to enter the workforce. In this course, student teams will continue working on the projects started in CIS 4296 and will develop the system, test it thoroughly, install it, document it and train the users. Together, these two courses give students experience in the entire Systems Development Life Cycle (SDLC). We will use a modified version of Agile development throughout this course. When feasible, team assignments from 4296 will remain, but due to resource and skill requirements, some students will be reassigned to a new project.

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 control, accessibility and software development methodologies, (including analysis, planning, design and implementation, operation, and maintenance). Professional skills will 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 and deployment.

**The overriding goal of this course is that the client receives a working solution that meets their needs. Remember – under commit, over deliver!**

**Student Competencies**

- By the end of this course, students should be able to demonstrate the following competencies:
- Students will use state-of-the art programming languages/tools. Responsive Design and ADA accessibility will be learned and utilized by all project teams.
  - Students will keep ease-of-use and maintenance at the forefront, since they will be turning the systems over to their clients at the conclusion of the course.

- 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, and server administration are all components that will relate to this project.
- As a Temple-defined 'writing intensive' course, students will be required to submit thorough and complete written reports, with requirements for iterative writing assignments.
- Students will gain experience in actual writing that is done within industry, including researching and documenting solutions to problems, writing meeting minutes, developing quality assurance plans and writing comprehensive and user-focused system documentation.
- 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 gain exposure and experience in both SDLC and Agile Methodologies in the capstone courses.

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

Students will:

- Learn and apply Information System consulting practices and techniques.
- Utilize and develop student writing skills, with requirements for iterative review and rewrite of documents.
- Be expected to meet their commitments regarding deliverables, via Sprints (of 2-3 weeks in duration) and weekly scrum meetings.
- Be responsible for independent research in the course of solving technical problems and meeting the demands and needs of their clients.
- Work together as cohesive teams to implement a functionally-rich and useful information system that meets their clients' needs.

### ***COURSE MATERIALS***

- As part of Temple's efforts to decrease expenses to students, there will be no textbook used for this course. Web, open source, Lynda.com and library resources will be utilized. Students will also be required to do independent research in researching and solving problems that arise in each system, whether related to software development techniques, quality assurance, Agile, deployment or any other system development issues.

### ***COURSE POLICIES***

- While there are many important and critical roles on every project, **those students who choose NOT to develop functional and useful C# code that is part of the final system will not receive a grade higher than a "B"**. Stored procedures do not count as code for this requirement. Note that I am not requiring everyone to code, nor am I minimizing the importance of other components of the software development process such as QA or documentation. However, you are completing the IS&T curriculum which contains at least 4 programming-focused courses so you should be proficient enough to contribute to the system's code. More importantly, if you do not code, during Sprint 1 there is essentially little you can do to contribute to the system development effort.
- All students are expected to attend **class for the entire time on all three days each week**, and you are expected to work significant additional time outside of class on your project. **My expectation follows the standard guideline...a 4 credit course on average requires at least 12 hours of work each week.**

- High priority will be placed on you successfully developing working code and cooperating to develop and deploy an effective system. The role of your Professor is largely to be a Mentor and Team Facilitator (Scrum Master) versus a lecturer.
- There will be 5 homework assignments which must be handed in and will be graded. Successfully completing these assignments will be an asset to your knowledge of key concepts for this class, and ultimately impact your grade. These all will require solid, well organized writing.
- 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 as it was in Capstone 1.
- Attendance will be taken and factored into your grade. Most of your course grade is based on group collaboration; therefore, you must be in class to be an effective group contributor.
- 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/getdoc.asp?policy\\_no=03.70.02](http://policies.temple.edu/getdoc.asp?policy_no=03.70.02).

### ***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.

### ***ATTENDANCE/PARTICIPATION***

Attending classes is critical for you to be successful in this course as it is all group work and you need to be with your team members throughout. If you miss class, it is your responsibility to contact your team members and make-up your work. Understanding that issues can occur, I will give you up to 4 absences. You will lose 1 point for each class that you miss after the 4 allowable ones, regardless of the reason (including job interviews). These absences include the Monday lab sessions.

### ***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 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).

### **WITHDRAWAL POLICY**

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

### **TEAM STRUCTURE**

Each team will be self-governed and figure out the best structure for their team. Each team needs to establish clear levels of responsibility and accountability, such as Project Manager (assigns tasks, keeps people on track, maintains Scrum Board), QA coordinator, Deployment Specialist, Documentation Coordinator, Lead Programmer, Computer Services Liaison, Client Contact, Database Manager, Security Specialist, Programmer, Stored Procedures Specialist, User Interface Design Coordinator, Software Control Specialist, etc....whatever works within your group. These roles may change, but they must be clearly defined. Scrum meetings and scrum status reports will occur throughout the semester. An important part of Agile development is that everyone is responsible for joint ownership of the project.

All Team members will be asked to write assessments of each team member's performance. This will happen throughout the semester. However, at all times the professor is responsible for grading. Be certain that all team problems are brought to the attention of the professor in a timely manner.

### **GRADING**

<b>Item</b>		<b>Total Points</b>	<b>Individual/Group</b>
5 Homework Assignments	10-15 points each	65	Individual
3 Sprint Contributions	45 points each	135	Individual
4 Test Plans: Prelim and Executed Sprints 2 and 3	10 points each	40	Group
4 User Documentation: Prelim and Final, User Manual and Comprehensive Doc.	10 points each	40	Group
2 Client Presentation: Prelim and Final	10 points each	20	Group
3 Peer Evaluations	5 points each	15	Individual
8 Scrum Status Reports	3 points each	24	Individual
4 Code Reviews	5 points each	20	Individual
Fulfillment of formal role	15 points	15	Individual

Attendance, Overall Contribution to all Sprints and Final Product		26	Individual
<b>TOTAL</b>		<b>400 points</b>	

***FINAL GRADES***

Final grades will be assigned as follows based on your percentages attained at the end of the semester. All letter grades on Blackboard will be translated into appropriate percentages.

<b>Final Grade</b>	<b>Percentage</b>
A	92-100
A-	90-91
B+	88-89
B	82-87
B-	80-81
C+	78-79
C	72-77
C-	70-71
D	62-69
F	Less than 62