Integrated **Capstone** for Information Science

Course Description & Learning Outcomes

Pre- or co-requisite: Completion of all InfoSci core courses.

The **Capstone in Information Science** is the main practicum course in the Undergraduate Information Science (BSIS) program. It provides a platform for students to integrate and apply many of the concepts, methods, and tools they have learned throughout their BSIS program of study. Over the course of the semester, students collaborate in groups on a specific project that addresses an information problem or fulfills an information need.

Our goals are that your capstone project will:
- Be an authentic, real-world application (i.e., has "so what" value)
- Tell an information science story with interrelated technology, human, social, information elements
- Enable you to discuss your project's impact on people/society

Upon successful completion of the course, you will be able to:
- Identify and articulate a problem that can be addressed or a need that can be fulfilled by making use of information and technology tools and methods within the field of Information Science.
- Identify the approaches, methods, tools and processes that can be used to address the problem or the need in question; and pick the most suitable solution mix given the requirements and constraints at hand.
- Develop and revise an action plan to address the problem or the need in question using the chosen solution mix.
- Implement and execute an action plan to address the problem or the need in question.
- Report the process and the outcomes of the intervention, critically evaluating the costs, benefits, and the overall success level of the project.
- Explain how the project is situated in its broader social or organizational context and reflects ethical and equity issues.
- Assess your own learning.
- Plan for ongoing professional and career development.
- Demonstrate professional skills that are necessary to function in information science-related job markets.

As a culminating experience, the capstone provides the opportunity for you to synthesize the information that you have been learning in academic coursework and be able to apply this information and the resulting skills to a practical project.

Phil Piety
ppiety@umd.edu
he/him/his

Class Meets
ESJ - 0215
Thursday
6:00 p.m. – 8:45 p.m.

Office Hours
Online / In-Person
Thursday
9 a.m. - 11a.m.
by appointment

Course Communication
- Announcements, both time-sensitive and regular updates, will be posted on ELMS and e-mailed to the class listserv.
- Contact me via ELMS or by e-mail (be sure to include "**INST 490**" in the subject).
- I will try to reply to e-mails within 48 hours –but please send a reminder if I do not – again, with "**INST 490**" in the subject.

Capstone Project Parameters

Students will work in groups of four to five over the course of the semester, and projects may include but are not limited to: designing or revamping an information system, administering a user experience study, establishing information system and/or policy requirements, or performing a data analysis intervention. Students will identify an information science problem, articulate the problem, identify tools and methods that could be used to develop a solution, create a project plan, and implement the solution. Project topics will be provided to the students, and each project will have at least one external stakeholder who will meet with the students at selected points during the project and contribute to the assessment of their work on the project. Most student groups will select from a project topic that has been coordinated in advance by the instructor.

Course sections are set up as their own consulting business with a team project manager (Teaching Assistant) and a chief information officer (Instructor). Because students will be working with real clients and organizations, the students are expected to submit all project related material to their team project manager (Teaching Assistant) and chief information office (Instructor) prior to submitting to the client.

Course Activities and Learning Assessments

Your final grade will be based on the following assignments. They are divided into **two overarching components**:

- **Project Capstone [CPxx]:** The assignments in this component cover all of the deliverables that are related to your group project.
- **Professionalization [PDxx]**: The assignments in this component are designed to support your efforts to launch your career as an Information Professional. We have collaborated with the UMD Career Center to craft a series of activities that will help you develop a professional profile, resume, job interview strategies, and job/internship search strategies.

Learning Assessment	Points for Assignment	Weight for Assignment
Project Capstone Component (65% of your grade)		
[CP01] Background Research / Context Analysis	5	5%
[CP02] User Stories and Backlog	10	10%
[CP03] Project plan with Burndown charts	10	10%
[IPR] Project In-Process /Internal Progress Reviews (IPRs) – multiple (**x6**)	2 points **each**, drop lowest score	10%
[CP04] Mid-Semester Assessment/ Survey	10	10%
[CP05] Project final report and other deliverables	10	10%
[CP06] Project presentation	10	10%
Professionalization Component (35% of your grade)		
[PD01] Resume / Online Portfolio	10	10%

[PD02] Mock job interview	10	10%
[PD03] In-class assignments	15	15%

Detailed Outline: Course Activities and Learning Assessments

Details regarding each assignment are included below.

- **Capstone Project Component.** Sixty-five percent (65%) of your grade is tied to your group capstone project. For the first week of the course, potential projects will be introduced to the class, and each student will have an opportunity to select up to three projects that s/he is interested in. The instructor reserves the right to load balance team members based on the skills needed to tackle the project with individual and team-based synergy. That is, a project that requires someone with database design and implementation experience will need at least one team member who is comfortable with/familiar with DBMS strategies and implementation.

    o **Project context analysis [CP01]**: Once your team is assigned a project, you will conduct a detailed analysis of the current situation, history, and issues pertinent to your client and project overall. The context analysis will provide deep background research, and will help your team to frame the project and understand your client's company/goals for undertaking the project.

    o **User Stories and Backlog [CP02]**: Each team will develop a set of project requirements based on interviews. For an agile approach the requirements will be organized in the form of a Product Backlog. The projects will learn and will develop their requirements into User Stories.

    o **Project plan with Burndown charts [CP03]:** The students in this class will learn about formal project plans and will also develop an Agile project plan that is based on empirical data collected from the ongoing work and utilizing burndown charts and similar velocity calculations.

    o **In-Process/Progress Reviews (IPRs):** Once the projects have begun, project teams will meet weekly for reviews and to get a list of requirements to work on. Students will be evaluated on their productive participation in this process and their use of the roles, artifacts, and ceremonies of the Scrum method.

    o **Mid-semester Assessment/ Survey [CP04]:** For this capstone the mid-semester assessment and survey will be an exam conducted on ELMS.

    o **Project presentation [CP05]:** Students will present their final deliverable either as a poster or a live presentation at the end of the semester. In most cases, the primary client will attend the presentation (others who are deemed key stakeholders, depending on the project, may also attend).

    o **Project report [CP06]:** By the end of the semester, the students will wrap up their project, bring together the project deliverables, and write a report that summarizes what they have achieved, what they have failed to achieve, what they see as the strengths and limitations of their project solution, and what future improvements and extensions they envision.

- **Professionalization Component.** Thirty-five percent (35%) of your grade is tied to your own individual professional development.
  - **Resume [PD01]:** Students will develop a competent resume and LinkedIn profile that is adequate for communicating their skills, achievements, formal credentials, and career interests in an effective way. This assignment is broken up into three parts; submitting your current resume/LinkedIn profile, submitting an improved resume/LinkedIn profile, and a final upload at the end of the semester.
  - **Mock interview/personal video [PD02]:** You will prepare for and participate in a mock interview for a position you have identified within your career domain. We will be practicing and receiving feedback in class, and will work with the UMD Career Center and iSchool faculty/contacts to conduct the interviews. More details to come as we get closer to this exciting professionalization activity.

    For this capstone class, we will have two elements to this part of the course: the mock interview and then students will make a 5 minute video that they can put on their websites.

Grades

Grades are not given, but **earned**. Your grade is determined by your performance on the learning assessments in the course. If earning a particular grade is important to you, please speak with me at the **beginning** of the semester so that I can offer some helpful suggestions for achieving your goal.

All assessment scores will be posted on the course ELMS page. If you would like to review any of your grades (including the exams), or have questions about how something was scored, please email me to schedule a time for us to meet in my office.

I am happy to discuss any of your grades with you, and if I have made a mistake I will correct it quickly. Any formal grade disputes must be submitted in writing and within one week of receiving the grade.

Final letter grades are assigned based on the percentage of total assessment points earned. To be fair to everyone I have to establish clear standards and apply them consistently, so please understand that being close to a cutoff is not the same this as making the cut ($89.99 \neq 90.00$). It would be unethical to make exceptions for some and not others. I do not round grades up, so do not ask me to do this at the end of the semester. **I will not respond to email requests for a grade bump at the end of the semester.** The cutoffs are as follows:

Final Grade Cutoffs									
+	97.00%	+	87.00%	+	77.00%	+	67.00%		
A	**94.00%**	**B**	**84.00%**	**C**	**74.00%**	**D**	**64.00%**	**F**	**<60.0%**
-	90.00%	-	80.00%	-	70.00%	-	60.00%		

Late Assignments

A late penalty will be applied to any assignment that is submitted late (starting one minute beyond the due date and time).

Late assignments will be graded according to the following formula:

$$[\text{grade on assignment}] * 0.92\char94[\text{number of days late}]$$

For example, if you turn in a 10-point assignment 1 day late, and earned a 100% on that assignment, your final grade for that assignment would be $(1.00)(0.92\char94 1)$, or 92%. If you turned in the same assignment 3 days late, and earned an 80%, your grade would be $(0.80)(0.92\char94 3)$, or 62%. Therefore, although your grade will take a serious hit if the assignment is late, **in this class it is always better to turn in an assignment late than to not do it at all**.

Please prepare in advance so that you will not encounter technical difficulties that will result in your work receiving a late penalty. **Technical difficulties are not an excuse for late assignments.** If you have a conflict with the due date, assignments can always be submitted early. **Generally speaking, illnesses are not an excuse for late assignments** because you will receive the assignments at least one week before they are due.

If you know you will not be able to meet an assignment deadline, contact me **before** the due date to explain why you will need to submit the assignment late; these will be evaluated on a case-by-case basis.

Project Presentation Policy
This policy is adapted from the UMD Exam Policy, as your capstone project presentation requires the same level of commitment and responsibility as is required for scheduled exams. **If you need to miss your Project Presentation because of outside circumstances** (e.g., a religious holiday, military duties, work/athletic team travel), you must email me **before the drop/add period ends (September 10)** to reschedule your team's project presentation time. If you are sick on any project presentation or IPR days, you must provide me with a doctor's note to be excused (see the UMD policies on absences) and should email me before the exam time to let me know you're sick. If you miss an exam due to other circumstances (e.g., oversleeping), you will not be able to make up the presentation.

Policy on Academic Misconduct
Cases of academic misconduct will be referred to the Office of Student Conduct irrespective of scope and circumstances, as required by university rules and regulations. It is crucial to understand that the instructors do not have a choice of following other courses of actions in handling these cases. There are severe consequences of academic misconduct, some of which are permanent and reflected on the student's transcript. For details about procedures governing such referrals and possible consequences for the student please visit http://osc.umd.edu/OSC/Default.aspx.

University of Maryland Code of Academic Integrity
The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit http://shc.umd.edu/SHC/Default.aspx.

Accommodations
Students with disabilities should inform me of their needs at the beginning of the semester. Please also contact the Disability Support Services (301-314-7682 or http://www.counseling.umd.edu/DSS/). DSS will make arrangements with the student and me to

determine and implement appropriate academic accommodations. Inclusion is one of the iSchool's core values, and we have attempted to make all materials and assignments accessible to people with varying abilities. However, if there is something else I can do to make the class more accessible please schedule a time to come talk to me. This will benefit not only yourself but also future students!

Get Some Help!
You are expected to take personal responsibility for you own learning. This includes acknowledging when your performance does not match your goals and doing something about it. Everyone can benefit from some expert guidance on time management, note taking, and exam preparation, so I encourage you to consider visiting http://ter.ps/learn to schedule an appointment with an academic coach. Sharpen your communication skills (and improve your grade) by visiting http://ter.ps/writing and schedule an appointment with the campus Writing Center. Finally, if you just need someone to talk to, visit http://www.counseling.umd.edu.

Everything is free because you have already paid for it, and **everyone needs help**… all you have to do is ask for it.

Names/Pronouns and Self Identifications
The University of Maryland recognizes the importance of a diverse student body, and we are committed to fostering equitable classroom environments. I invite you, if you wish, to tell us how you want to be referred to both in terms of your name and your pronouns (he/him, she/her, they/them, etc.). The pronouns someone indicates are not necessarily indicative of their gender identity. Visit trans.umd.edu to learn more.

Additionally, how you identify in terms of your gender, race, class, sexuality, religion, and dis/ability, among all aspects of your identity, is your choice whether to disclose (e.g., should it come up in classroom conversation about our experiences and perspectives) and should be self-identified, not presumed or imposed. I will do my best to address and refer to all students accordingly, and I ask you to do the same for all your fellow Terps.

Students in Need
If you feel you are encountering psychological problems that hamper your course work, please refer to the Counseling Center (301-314-7651 or http://www.counseling.umd.edu/) for expert help. For more information on UMD's Student Services, see http://www.studentaffairs.umd.edu/student-life.

If you or someone you know feels unsafe, the university has resources (see list below). Read more about hate-based crimes here: https://ocrsm.umd.edu/files/Hate_Bias_FAQs_final.pdf.

Name	Phone	Website
University Counseling Center	301-314-7651	www.counseling.umd.edu
University Health Center and Mental Health Services	301-314-8180	www.health.umd.edu
University of Maryland Chaplains		thestamp.umd.edu/memorial_chapel/chaplains
Office of Civil Rights and Sexual Misconduct	301-405-1142	www.ocrsm.umd.edu

Course Syllabus – INST 490 Section 0101

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INST490
Spring 2020

Awesome Sauce
BSIS CAPSTONE

Week Date	Topic	Readings/Audio/Video	Due			
			Wed Eve b4 class	Due in Class	Sprint Review	End of Weekend
1 1/30	**A: Introduction**			PD03a		
	B: career goals and job search					PD01a
2 2/6	**A: Waterfall part 1** • Project management basics • Elements of Project Plan • Developing project plans from requirements • Sub-tasking & WBS	https://open.umn.edu/opentextbooks/textbooks/project-management Chapters 1-3				
	B: Build a project plan		PD01b	PD02a		
3 2/13	**A. Career Center**	ELMS: Interview Prep				
	B. Careers Center	ELMS: Mock Interview Questions		PD03b		
4 2/20	**A: Agile**	https://agilemanifesto.org/				
	B: Agile	Value, Principles, History		PD03c		
5 2/27	A: Mid-Semester Assessment	Review early material		CS04		
	B: Team Activity			PD03d		
6 3/5	A: Team Assignments					
	B: Project Assignments		CS01	PD03e		
7 3/12	A: Team Technology Plan					
	B: Technology Plan			PD03f		
	SPRING BREAK					
8 3/26	A: Team Time					
	B: Lecture Scrum Structure					CS02a
9 4/2	A: Team Time				IPR.a	
	B: Lecture Task boards and user stories					CS02b
10 4/9	A: Team Time				IPR.b	
	B: Lecture Estimating					
	A: Team Time				IPR.c	

Week Date	Topic	Readings/Audio/Video	Due			
			Wed Eve b4 class	Due in Class	Sprint Review	End of Weekend
11 4/16	B: Lecture: Velocity					CS03b
12 4/23	A: Sprint:				IPR.d	
	B: Lecture Sprint Retrospective					
13 4/30	A: Sprint:				IPR.e	
	B: Lecture: Scaled Agile					
14 5/7	A: Team Time		CS03a			
	B: Lecture: Writing Professional Reports		PD01b			
15 5/14	Project Presentations		CS05	CS06		