

Computing for Good

Experiences in Humanitarian Computing

Fall 2013

Overview:

How can computing help make the world a better place? Why is providing connectivity important? How best to do so? How can computers help a nation heal? Can we avoid wars and track diseases in time to avoid epidemics? We explore problems faced by developing countries and underserved populations from a computer science perspective.

Note: This course is cross-listed for graduate students in the College of Computing as CS 6150 and undergraduates as CS 4911. This class satisfies the senior capstone design requirement for the undergraduate BS in Computer Science and the BS in Computational Media.

Learning Objectives:

- To undertake a significant, semester-long design project working on a team and using state-of-the-art project management tools.
- To develop oral presentation skills.
- To develop a rudimentary understanding of a domain of social importance.
- To develop a rudimentary understanding of the key issues in humanitarian computing, including sustainability, resource availability (or lack thereof), novice user design, design for diverse user populations.

Professors:

Dr. Ellen Zegura (ewz@cc.gatech.edu)

Office: Klaus 3342

Office hours: Monday 12-1pm

Dr. Gregory Abowd (abowd@gatech.edu)

Office: Room 329, 3rd Floor, Technology Square Research Building / Room 220H, 2nd Floor, Health Systems Institute

Office hours:

Agile facilitator:

John Williams (johnwlms@gmail.com)

Teaching Assistant:

Parisa Khanipour Roshan (khanipour@gatech.edu)

Office: Culture and Technology Lab, 3rd floor, Technology Square Research Building

Office hours: During open TA office hours on the syllabus and outside class by email appointment.

Agenda		Deliverables
Week 1 (Aug 19-23)	Mon	Class overview; Gregory and Ellen experiences; Student introductions
	Wed	Project descriptions: Elizabeth Downes, FOCUS of GA (G)
	Fri	Project descriptions: Juan Leon, Carl DiSalvo, Center for Discovery (G), Marcus Autism Center (G) Skills and Interests
Week 2 (Aug 26-30)	Mon	Project descriptions: Ellen Zegura Project Preference
	Wed	Project teams assigned; Team contract review; In-class team meetings
	Fri	Agile / Scrum Coaching - Agile Basics 101 - Scrum Foundations Team Contract, Assigned: Vision document
Week 3 (Sep 2-6)	Mon	Labor Day - no class
	Wed	Reading and discussion Reflection
	Fri	Product Ownership and Product Management - Prototyping and UX/UI
Week 4 (Sep 9-13)	Mon	Sustainability considerations
	Wed	Design document overview
	Fri	Sprint Review - Team Checkin* - Q&A Vision Document v1.0
Week 5 (Sep 16-20)	Mon	System design
	Wed	Tools
	Fri	Open TA Office Hours
Week 6 (Sep 23-27)	Mon	UI design
	Wed	Team checkin
	Fri	Sprint Review - Team Checkin - Q&A Design Document v1.0
Week 7 (Sep 30-Oct 4)	Mon	No class - work in teams
	Wed	No class - work in teams
	Fri	Open TA Office Hours
Week 8 (Oct 7-11)	Mon	Project reviews**
	Wed	Project reviews
	Fri	Project reviews
Week 9 (Oct 14-18)	Mon	Fall Break - no class
	Wed	Reading and discussion Reflection
	Fri	Sprint Review- Team Checkin - Q&A Vision and Design Document v2.0
Week 10 (Oct 21-25)	Mon	No class - work in teams
	Wed	No class - work in teams
	Fri	Open TA Office Hours

Week 11 (Oct 28-Nov 1)	Mon	Testing plans	
	Wed	Sustainability	
	Fri	Sprint Review- Team Checkin - Q&A	
Week 12 (Nov 4-8)	Mon	Project reviews	
	Wed	Project reviews	
	Fri	Project reviews	Testing Plan
Week 13 (Nov 11-15)	Mon	No class - work in teams	
	Wed	No class - work in teams	
	Fri	Sprint Review - Hardening Sprints Start	
Week 14 (Nov 18-22)	Mon	Customer-facing deliverables	
	Wed	Reading and discussion	Reflection
	Fri	Open TA Office Hours	Class Reflection
Week 15 (Nov 25-29)	Mon	Poster design	
	Wed	Fun!	
	Fri	Thanksgiving - no class	
Week 16 (Dec 2-6)	Mon	No class - work in teams	
	Wed	C4G Reception/Posters/Demos	
	Fri	-	Release notes, Installation guide, User manual, Sustainability plan

* Team Checkin: Informal status update in class

** Project Reviews: Formal reviews with presentations (graded)

Grading:

1. Class Participation: 10%
2. Interim Presentation: 15%
3. Final Presentation (including posters/demos): 20%
4. Agile Sprints: 12.5%
5. Reading deliverables and discussion participation: 7.5%
6. Project Documents: (35%)
 - Team Contract: 0%
 - Vision Documents (including the initial sustainability perspective): 10%
 - Design Documents: 10%
 - Testing Plan: 5%
 - Customer-Facing deliverables (including the final sustainability plan): 10%

Class Schedule: Monday, Wednesday, Friday, 11:05 - 11:55 am

Class Location: Klaus 1447

C4G Lab Location: Klaus 3405. Buzzcard access will be given to all students. Students can use this lab space to hold their group meetings during the semester.