

Information Session Notes

Note: With all of these, if you are worried about the pre-reqs – contact the Professor. Some of this is up to their discretion about who enters their class.

Intro to HCI – CS 3724

- **Professor: McCrickard**
- More engineering focused than other HCI classes – very process based
 - Cycles, decisions, techniques
- Walk through the UX lifecycle
 - Analysis (what exists now), Design (what should exist), Prototype (some form of building it), Evaluation (assess – did you meet the needs)
- Structure
 - Tuesday - lecture
 - Thursday – activity in small groups, try out what we are learning
- Big Class semester project that goes through the UX lifecycle
- Pre-req for many of the following HCI courses

HCI Capstone – CS 4784

- **Professor: McCrickard**
- Theme – Technology on the Trail
 - What happens when we take technology to the outdoors, where there is no power guarantees, and nice and comfy spaces to use it?
- The Technology
 - McCrickard has a big ‘box of toys’ – wearables, sensors, gps etc
- Questions and Aims for the class
 - How can we connect these technologies in interesting ways to be helpful in the wild?
 - How do we insert technology in a way that doesn’t interfere with the reasons many people go out to the wild (to get away from society and tech)
 - What about reflective technologies – like data from elevation and temperature that you have collected on your hike, what do people do with that when they get back home?
- Examples of Class Projects
 - McCrickard said that any student that hiked 100 miles with certain technologies would be guaranteed an A, and one student did (this was at the graduate level though)
 - Taking pictures with Go-Pro like technology, how do we do this in a meaningful way? (while hiking it is usually pictures of the people in front or behind you, not really beautiful vistas until you get to the top)
- Also make different GUIs and evaluated if they would be appropriate for these contexts

Intro to GUI and Graphics – CS 3744

- **Professor: Luther**
- Goals for the class
 - Become a full stack developer, with a heavier focus on the front end (designing it, building it and evaluating it)
 - Very much situated in Web Development – not a lot of other classes have chances to learn about this
- Structure
 - Meets on Monday and Wednesday at 2:30PM
 - Totally project based, no homework or examples
 - First 3 are getting the fundamentals, and are individual
 - 1 – design the GUI
 - 2 – implement the front end
 - 3 – implement the back end
 - The second three are about advanced topics and group based
 - 4 – data interaction
 - 5 – add a social and collaborative component (accounts, permissions)
 - 6 – add graphics and visualizations
- The Technology
 - The goal is to learn how to take many different kinds of tech and figure out how to blend them together, find a system that works for you about how to find what you need and get it to work
 - Some technologies that the course will touch on: HTML, CSS, Bootstrap, JQuery, apache, MySQL, json, xml, crowdsourcing platform with Mechanical Turk, amazon hosing, ex2 instance etc
- The Theme
 - Build some kind of social media platform that promotes connecting with trustworthy information

Creative Computing Capstone – CS 4644

- **Professor: Harrison**
- Good fit if you are....
 - A student who feels that the classes you have taken so far have not allowed you to do what you feel you should be doing with technology, these students have something that they want to say or do with technology and are looking for a platform to help them do so
 - Some students who are not in CS will also be in the class – coming from music and art
- Aims for the class
 - Technology Agnostic
 - No particular technology will be taught, instead you can find and teach yourself whatever tech you feel you should be using for class projects (also you can build on the skills you already have from other courses)

- Reflection
 - There are no exams, but lots of writing – and 2 reflective essays
 - The Professor will have you keep a journal of your thoughts about the class, what you are learning and you will use this as a source to answer the question he poses for the essay
- Creativity
 - Probably the only constant
- Structure
 - Meets for 3 hours once a week – Wednesday afternoon
 - First half of the semester
 - 3 or 4 short projects
 - Your partners will be assigned by the professor, so that you get to know a lot of different people in the class
 - Second half of the semester
 - You work on your semester project
 - There are no requirements for the project – rather just constraints
 - Constraint – you have to make a poster before you do the project that specifies what you are going to require of yourself
 - Constraint – your project must embody the class theme, and you must decide what the theme means and defend how your project embodies it
 - ICAT Day
 - Your project will be showcased on ICAT day, to the public
 - It must actually ‘work’ – you cannot just explain what you hoped it would do
 - The hope is that this is a platform for you to share something that you are proud of
- Theme
 - Systems of Truth
- Examples of Past Projects
 - NUI – what happens when we take minimalism to the extreme, and design GUI’s that have no text or symbols, but just shape and color?
 - Middle Experience – how can we better understand empathy, and can we use technology to help increase it?
 - Light Wall – let us simulate sound with light, have little LEDs that light up and propagate across a board with sound waves

UX Design – CS 3984

- **Professor: Kelliher**
- NEW CLASS – Cross Discipline
 - Origin – when teaching courses here, Kelliher’s students would tell her that she was critical of their designs, which though could be helpful they didn’t have a design background to use to help them! So she decided that this was where students in CS could really benefit from – a studio design format
- Structure

- Will be co-taught with a junior industrial design studio, they will meet 3 times a week for 3.5 hours, but the CS students will join them just for Friday
- The hope is that these two disciplines will learn from each other – CS students can help with the technical and computing knowledge, and the ID students can help with the design knowledge
- Topics
 - Semester long project – either a product or service design
 - Needs to use Artificial Intelligence or Machine Learning
 - And whatever form of computation – it must work, these are not theoretical!
 - Be inside the health domain (think negotiating insurance, monitoring diabetes, keeping track of prescriptions etc)
 - Going to use Design Methods (and some HCI)
 - Prototypes, storyboards, adaptive GUIs
 - Classes like Intro to HCI, GUI and Creative Computing Capstone can be helpful, but students are not expected to have this knowledge when entering the class
 - Dynamic Interactive Annotated Portfolio
 - More big companies are expecting students to not just have coding projects, but to be able to showcase them in some way
 - These portfolios work on presenting your work, not just having it sit on github

Hypertext and Multimedia (also a Capstone) – CS 4624

- **Professor: Fox**
- Topics
 - About three areas related to Information:
 - Multimedia - includes audio/sound, images/photos, video, and text.
 - Hypertext - refers to the WWW and other hypermedia systems
 - Information Access - includes search engines and their inner workings.
- Structure
 - Discussion on Key works in each of the fields above
 - Special Activities
 - About 10 other – includes field trips and guest presentation on interesting topics
 - Semester Projects
 - groups of size 2-5.
 - Final reports and other deliverables from recent project are at: <https://vtechworks.lib.vt.edu/handle/10919/18655>
 - Projects are selected from a list, or can be proposed by students.
 - Many are service learning activities, helping local organizations
- Resources and Facilities
 - Digital Library Research Laboratory. This includes a 21 node Hadoop cluster used for big data processing, with over 150TB of disk storage.
- Expectations
 - This is a 4000 level capstone course, so senior level work is expected. Students should be prepared to apply what they have learned in prior courses to practical problems, and to improve their skills at learning a field using primary references as well as some secondary resources.

- Students who have focused on any of the CS tracks are welcome! This course serves as a capstone for any of the areas.
 - Attention to reading, labs, demonstrations, and class discussions is imperative. Students must demonstrate mastery of a body of knowledge and its application.
- Prereqs
 - CS 2606 or 3114.