Parsons The New School for Design
MFA Design + Technology, Collaboration Studio
Originate: Web Development, gadgITERATION
PSAM 3987, CRN 5550 A, FALL 2014
Thursday 7:00-9:40, 63 Fifth Ave, Room 311

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COURSE DESCRIPTION

This studio investigates community and collaboration on the web, as well as innovation in education. Our content partner is gadgITERATION, a project led by Instructor Louisa Campbell and MFA DT Director Katherine Moriwaki, with major support from the Hive Digital Media and Learning Fund in The New York Community Trust. Mozilla and MacArthur Foundations. The open source program is designed for underserved teenagers. It uses low-barrier to entry, DT-designed hardware for rapid prototyping and creativity generation, to promote engagement with STEAMD (Science, Technology, Engineering, Art, Math and Design).

We mark the beginning of the project's second phase, the development of an extensible online gadgITERATION platform. Our goal will be to engender low-cost replication and widespread implementation of the program. (The first, on-going phase consists of developing and facilitating workshops across New York City.) Important precedents for development include the Little Bits, OpenProcessing, arduino, Tinker.Make.Innovate, and Scratch communities. Our site will face youth, educators, and parents, as well as potential funders.

LEARNING OUTCOMES

The central learning outcome is understanding development strategies behind a Minimum Viable Product (MVP). ("*The minimum viable product is that version of a new product which allows a team to collect the maximum amount of validated learning about customers with the least effort.*"[3])

PART ONE: The first part of the course is twofold. As we investigate the process of web development we ask what is gadg/iTERATION now and what will it become? We will analyze the current program as we conduct domain and precedent analysis. What are best practices in site structure, usability, and visual clarity in terms of reaching a core audience, mission or function? How can these findings be applied to a gadgITERATION platform? We will use our research to define the vision for the platform, the users and their needs, the core design principles and overall functions of the site.

To this end immersion in the project is necessary. What is it like to be a novice user of the program? We will use the central device, The NoiseMaker, to imagine ourselves as educators working towards lesson plans, and kids using hardware as material for creative expression, for the first time. Knowledge of the Common Core and State Standards for 6th-12th grades will be required. Staffing our table at World Maker Faire 2014 will provide firsthand experience with all sectors of the target audience, as well as exposure to the broader tinkering and making community.

PART TWO: In the second part we dive into the mechanics of web design. You will gain skills in backend and frontend development, using languages such as HTML5, CSS3, JavaScript, in addition to utilizing a database. We will take our concepts developed during the first part of the course and break into groups to design and construct one area of the site. Each group will focus on the three elements: content, UI/UX, and coding/programming. You will ensure your end results are usable, useful and desirable.

ASSESSABLE TASK & GRADE CALCULATION

Task	Description	%
Studentship Class Participation/ homework Organization and Communication	• Regular attendance on scheduled meeting days. • Participation in discussion and critique, evidence of engagement with activities and exercises. • Completed assignments (on time), ability to plan and execute course requirements according to deadlines. • Participation of whole-class aspects (Initial NoiseMaker projects, Maker Faire; Mappin our platform's Site Architecture, Use Narratives, Journey Map, look and feel,) • Communication and teamwork.	20
Topical Research and Project Presentations	Teams and individuals will share findings on topics to be assigned throughout semester, as well as on particular homework assignments.	20
Curriculum Project Design (s)	New NoiseMaker Projects keyed to Curriculum, Designed, Tested, Refined: Documented as the Bottle Violin curriculum project on gadgiteration.org (At least one project per student.) (http://www.instructables.com/id/How-to-make-a-great-Instructable/)	30
MVP	Each team will be tasked with one section of our Minimum Viable Prototype. Each team is responsible for applying Iterative Design Process to this section. Parts TBD will function for small	30

	user group testing.	

SCHEDULE

Date	Topic	Assignments	Remarks
9/4	Introduction to Course and gadgITERATION	1. Precedent Analysis. Create a case study (5-10 slides) of one precedent that includes (but not limited to) the following: ● Site architecture: break down the pages, illustrating the page hierarchy, relationships and flow of content/information. ● Audience: identify the key user groups that utilize the site and why they access the site. ● Journey map: using one of your user groups, map out (or storyboard) a possible interaction and identify the successful or challenging points of the journey through the site. ● Visual clarity: describe the look and feel of the site and how the functions are arranged on 2-3 main pages. What of the navigation, the visual hierarchy, the color choices/whitespace, etc. ● Your key takeaways: what findings will be useful to us as we develop the gadgITERATION site 2. Interview at least one stakeholder 3. Gain thorough and intimate understanding of gadgITERATION. Review all current site materials.	
9/11	Precedent Research and Core Site Functions		
9/18	The Noisemaker	1. Imagine yourself as a teen or educator and create a project using the NoiseMaker. (In class work session) 2. Attend and explore Maker Faire and help to run table and demo your project. 3. Write a **narrative** of your experience, at least one page, both at the table and	

		around the Faire. Please focus on how your new found understanding of Maker culture might inform your site development ideas. Due to instructors 9/25 through Dropbox.	
9/25	No class: Rosh Hashanah	1. Please write/create **a design document** consisting of the following. Prepare 5-10 slides on your work for presentation. Please note this is an assignment for each individual. ● **Persona Narrative** (250 Words) Please pick one of our stakeholders and write a narrative description describing who this person is and how ideally s/he would use the ideas site. ● **Features and Functions** (2-3 pages) Describe your idea of all major features and their functions, a short paragraph for each. Remember, this is blue sky time. Now that you've had your Maker Faire experience, imagine the gadgITERATION program's next evolution and conjure up a site to match. ● **UX Guidelines** Write out 4-6 guiding UX principles to anchor how you make each design and function/feature decision for the gadgITERATION site. Each description should only be 1-2 sentences. Examples here. ● **Map** Please map your ideal version of the site. Provide wireframes for at least four important pages.	
10/2	A) Online Communities (Guest Speaker: Jennie Crowley, Bank Street College of Education, Mozilla Web Maker Super Mentor) *What are successful online communities in education? How do they create communities? How do educators pick platforms to use?* B) Concept Presentations	1. Individually browse through the Common Core standards and NYC Tasks and Units.* Pick several pieces of Math or Science content in any grade (6-12) that are appropriate to the NoiseMaker. http://schools.nyc.gov/Academics/CommonCoreLibrary/TasksUnitsStudentWork/default.htm http://www.corestandards.org/ 2. In your group create a 5-10 minute presentation synthesizing the reading and your key take aways	(Apon in for second half of class)

10/9	A) Presentations (45 min) B) Create discreet lesson plans with Noisemaker IN CLASS WORK WITH GABI AND LOUISA	1. (NOTE: This assignment is postponed. First draft is due on 11/6.) Create one lesson in a designed layout, ala Bottle Violin on the site. 2. Please review some basic HTML+CSS world. We are not going to have much time for JavaScript and beyond. Please bring what you have to class (sketch, ux, prototype, ideas, teammate, etc.) and we will discuss the next steps. To get your head in the zone: http://www.codecademy.com/skills/make-a-website	(Apon not in attendance)
10/16	Web Design 101: Basic Structure, HTML, CSS 1. How a website actually works? What are the components that make website dynamic? 2. Basic HTML5 semantic tags 3. Different CSS positionings, cosmetic attributes, animation, transition and transform	1. As a team, translate wireframe into html (DOM) element 2. lightly style a web page using cascade style sheet (CSS) according to the given design	Reading: http://wtf.tw/ref/duckett.pdf Form teams. Apon will explain work flow and assignments
10/23	Web Design 102: Introducing jQuery and basic web interaction 1. Variables and datatypes 2. Basic JavaScript statements: for, if, else With jQuery, 1. Interact with DOM elements 2. Animations 3. Event listeners	1. Create simple interaction with different types of <input> tag. 2. As a team, pursue interaction design goal of your design/functionality. Provide a solid guideline of I/O (input and output) 3. Start implementing I/O interaction and rendering based on your interaction guideline.	
10/30	Web Design 103: jQuery UI and plugins	Apply possible jQuery UI and plugins to the design.	
11/6	Introducing Database using Parse.com	Integrate Parse database with the design. Your web page/ web application should be	

	1. Basic JS function review 2. Perform database commands using Parse APIs, CRUD operation	able to store and retrieve information from the external database.	
11/13	A) Guest: Leah Gilliam, Mozilla WebMaker and Hive NYC B) work session	“	
11/20	Work Session w/ instructors	“	
11/27	No class: Thanksgiving	“	
12/4	Code workshop	“	
12/11	Final Presentation	Submit work documentation and deliverables throughout the class in Dropbox	