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# Chasing the Unicorn: Toward a Dynamic, Modular, and Structured Living Curriculum for HCI

## **Craig M. MacDonald**

Pratt Institute  
144 West 14<sup>th</sup> Street, 6<sup>th</sup> Floor  
New York, NY 10011 USA  
cmacдона@pratt.edu

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## **Introduction**

The increasing ubiquity and complexity of technology has led to a deep integration of digital tools with organizational processes. With inputs from sales, marketing, development, management, and others, most design problems now require interdisciplinary collaboration and communication between tens, if not hundreds, of individuals, including those with expertise in Human-Computer Interaction (HCI) and User Experience (UX). As a result, hiring managers have started to demand “UX Unicorns,” or HCI professionals who possess “an advanced and adaptive skill range” [6] in a diverse array of domains, including front-end development, visual and graphic arts, mobile integration, project management, information organization, interface design, copywriting, content strategy, and mixed methods research, plus demonstrated excellence in oral/written communication, teamwork, storytelling, and leadership, among others [2]. In addition, new HCI professionals are expected to be able to succeed immediately in a variety of environments, from Fortune 500 companies to start-ups, in a variety of sectors, from finance and healthcare to education and non-profits, and in a variety of organizational structures, from large, distributed teams to solo endeavors (i.e., the “UX Team

of One" [1]). Taken together, these developments pose several significant challenges for HCI education.

### **My Experience in HCI Education**

I have been deeply interested and involved in HCI education over the past three years, starting when I was a Ph.D. student in HCI at Drexel University (where I taught HCI courses at both the undergraduate and graduate level) and continuing through my current position as Assistant Professor in the School of Information and Library Science at Pratt Institute.

Most importantly, I developed and coordinate the 12-credit User Experience concentration in Pratt's Master of Science in Library and Information Science degree program [4][5]. In Fall 2012, I re-designed the two core UX courses – "LIS643: Information Architecture & Interaction Design" and "LIS644: Usability Theory & Practice" – to introduce students to the core principles and practices of user-centered design and evaluation. To complete the remaining 6 credits, students must take at least one course from the "Advanced Topics" list, which includes courses in Information Visualization, Research Methods, Human Information Behavior, and a new course I'm developing titled "Topics in User Experience," which will be taught for the first time in Summer 2014 and will cover a variety of UX-related topics (e.g., visual design, designing for mobile, content strategy, etc.). I am also currently preparing an application to the New York State Department of Education to convert the UX concentration into a post-master's certificate, which would be the second such program in the United States and the first such program offered from an LIS department.

I also advise the Pratt UX/IA student group (launched in March 2013), which was created to help students gain a deeper understanding of the UX profession. As such, the group holds monthly meetings on a variety of topics (e.g., freelancing, UX portfolios, etc.), facilitates networking events with the local UX community, schedules talks from industry professionals, organizes workshops on UX software tools (e.g., Omnigraffle, Axure), and coordinates tours of local UX offices (Bloomberg, Google). Additionally, I have worked on UX consulting projects with students to supplement their coursework with practical experience.

Furthermore, I organized and moderated a town hall session on the topic of HCI education at World Information Architecture Day in New York in February 2013. The results of this session were published in the ASIS&T Bulletin this past October [3]. Currently, I am working with fellow educators from New York University and Parsons the New School for Design to establish a UX Instructor's meet-up in the New York City metro area, which we hope to grow over the coming months into a valuable resource for individuals engaged with HCI education.

### **Defining an HCI "Living Curriculum"**

Through my experience as an HCI researcher and educator and through conversations with practitioners, it has become clear that a single, static curriculum is not appropriate for a field changing as rapidly as HCI. As mentioned in the introduction, the demand for interdisciplinary collaboration, the call for "UX Unicorns," and the variability of professional HCI contexts have created a situation where there is truly no such thing as a "one size fits all" HCI curriculum. Instead, what's needed is a living curriculum that is:

1) *Dynamic and Moderated*: A living curriculum must be regularly updated to reflect modern trends, but also moderated by a community of HCI experts to ensure updates reflect actual, substantive changes to the field rather than fleeting trends.

2) *Modular and Adaptable*: A living curriculum should not be a single document but a system of “modules” organized around specific HCI topics, concepts, methods, skills, or roles and that are adaptable for different constituencies (undergraduate, graduate, continuing) and educational models (e.g., 1-week, 10-week, 15-week, etc).

3) *Structured and Configurable*: A living curriculum should be valued for its structural flexibility; that is, the curriculum should allow educators to configure modules into *educational programs* in addition to stand-alone classes or courses. For instance, an HCI education program targeted at library science students would likely require greater depth in the areas of Information Architecture and user research methods, while an HCI education program for undergraduate computer science students would likely provide just a cursory overview of these topics and instead focus on interface design and front-end development. A strong living curriculum should be configurable to these and other contexts.

### **My Contributions to a “Living Curriculum”**

Based on my experience as an instructor and as coordinator of an HCI education program, I believe I am positioned to make strong contributions to a living curriculum for HCI. First, I am more than willing to both contribute and review content modules for a living curriculum to ensure it is relevant, effective, and up-to-

date. I am also interested in helping to define an appropriate format or template for submitted content so that it is easy to locate, interpret, and use. Second, as a coordinator of a graduate-level HCI program for LIS students, I strongly believe that every HCI educational program must start with a well-defined set of goals and objectives that are clearly linked to student learning outcomes. Thus, I believe I can make significant contributions to defining the structures and frameworks around which the living curriculum can be organized and assessed. Finally, I am interested in coordinating these efforts with the newly formed UX Instructor’s meet-up in New York City to draw from a larger set of experiences and perspectives and further strengthen the academia-industry relationship.

### **References**

- [1] Buley, L. *The User Experience Team of One: A Research and Design Survival Guide*. Rosenfeld Media, Brooklyn, NY, USA, 2013.
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- [6] UX Unicorn: Definition. <http://uxunicorn.com/>