6724 Special Topic in HCI: Research Through Design (Fall 2017)

CRN: 89409
Tu Th 5:00–6:15, 304 McBryde
Instructor: Steve Harrison <srh@cs.vt.edu>

This class is a seminar on the special topic of research through design (or "RtD"). RtD has become a legitimate form of HCI research in the past decade. Individual students will be assigned to lead the discussion. As discussion leader, each will be expected to do more extensive research. Students will also conduct a research-through-design project; the write-up will be targeted to appropriate conferences on RtD.

This course has a number of complementary objectives: introduce design thinking, explore the uses and limits of various RtD methodologies, locate RtD with respect to more traditional HCI research approaches and values. Some topics include:

- Design thinking
- Reflective practice
- Design research
- Market probes
- Cultural probes
- Genre design
- Critical design
- Autobiographical research
- Annotated portfolios
- Future fiction
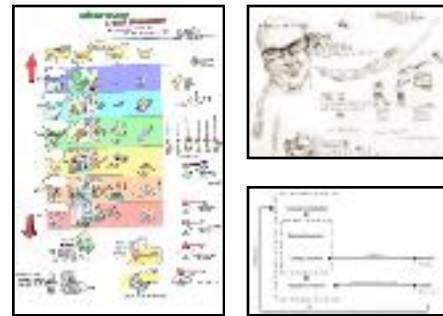
Quantitative methods, mostly derived from information theory and cognitive psychology, have dominated research, driving out the possibility of design thinking-based approaches. While these quantitative methods have proved a useful engineering element, they have not provided a source of innovation or of re-conceptualization. The role of design in HCI practice first gained prominence when Apple began to use it as a market differentiator. The tide of design has begun to re-shape research. First there have been categories of design submission at conferences and then conferences devoted to designing interactive systems. Finally, using design as a research approach got a few key proponents willing to convince the field that they were making contributions to the field. Since the terminology "research through design" has gained acceptance in HCI about a 10 years ago, various approaches have emerged: probes, cultural probes, critical design, autobiographical research, annotated portfolios, and future fiction.

While this is nominally an HCI course (and therefore targeted at CS and ISE students focussing on human-computer interaction), this course should be of interest to those interested in how design works in relation to research. Thus, students in the **Human-Centered Design** program, for example, are encouraged to take this course to further develop design thinking skills as well as think more deeply about the nature of research. Students in non-HCI parts of CS are encouraged to enroll to get a feel for how HCI practitioners think about innovation.

While there is no pre-requisite, having taken HCI Models and Theories (CS 5724) would provide some background. For those who have, this course will feel like a specialized continuation of it.