

## LMC 6318 Experimental Media

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Tue/Thu 12-1:30 (Skiles room 2 and TBC)  
Office hours: Thu 2-3 in TSRB 320B

### Description

What can we learn from craft practices, material conditions, and a culture of "making" to develop new interaction design? Starting with a basic discussion of research in creativity and knowledge we will move into material practices and learn from actual craft approaches. In the final section of the course, students will apply those findings in their own mixed designs.

Students will not only participate in discussions, and design challenges but will also observe and analyze a crafter's practice before they will design specific interventions in relation to this practice.

What you should expect: an introduction to issues of creativity research through readings and discussions, an in-depth study of a craftsman and her practice, a final project in which you combine material practices with digital ones to a proof-of-concept prototype.

The course should be interesting for MS and PhD candidates with an interest in physical computing as well as traditional craft.

### Outline and Goals

How can we apply issues from practical and material-based issues of human creativity to develop digital media? This course is divided into two main sections: the first deals with an introduction to creativity research and provides pointers to some of its historical approaches, definitions, and debates. Then, we will look into different research methods to look at creativity and assessment methods, tools, mechanisms for creativity research. The result of this process will be the adoption/ creation of our own assessment tool in the form of a questionnaire/ research tool.

In the second stage, we will apply this tool to our own sample project. For this project, students will identify a local craftsman/ maker/ creator (of a physical object), research the person's practice, sociocultural context, and resulting objects. This analysis will be first purely critical. The second step is to engage in the practice and experience the creative process itself. The final step is the design and proof-of-concept implementation of digital media onto the analyzed practice leading to an experimental approach to new media design based on a particular creative practice.

### Learning Objectives MS

- Demonstrate knowledge, comprehension, and application of the tools and formal design elements of digital media design.
- Demonstrate the ability to devise, design, create, and assess prototypical digital media artifacts, services, or environments and to contextualize them within recognized traditions of practice.
- Demonstrate use of digital media to create prototypes
- Can develop interactive media artifacts

- Can summarize their work orally and in written form using formal terminology
- Can justify the design choices in their works

### Learning Objectives PhD

same as MS plus the following:

- Students can formulate original interpretations and design original prototypes that reflect an understanding of the humanistic context of digital media.
- Students can formulate and explore the answers to critical questions in the domains of Arts & Entertainment, Public & Civic Media, and Knowledge & Creativity as related to new media.

### Schedule

(changes are bound to happen)

1/6	Intro to course <b>Assignment:</b> creative item	
1/8	Discussion: Approaches to creativity <b>Due:</b> creative item (present in class)	Optional: Sawyer
1/13	Approaches 1: Genius and person <b>Assignment:</b> creative person	Csikszentmihaly
1/15	Discussion: who is creative and why? <b>Due:</b> creative person (compare, discuss, present) <b>Assignment:</b> Report on practice <b>Assignment:</b> Report on experience	
1/20	Approaches 2: Creativity, cognition, and learning	Boden; Papert
1/22	Discussion: Two sample projects	
1/27	Approaches 3: Sociocultural Creativity	Amabile
1/29	Discussion: Participation in art and design	Bishop; Ehn; optional: Kester
2/3	Methods 1: Creativity and play and doing	Sutton-Smith; Shank et al.; Hallam/ Ingold
2/5	Discussion: Murray visit	
2/10	Methods 2: Measuring creativity	Schoen; Sawyer; Keller & Keller; Sternberg (2012)
2/12	Review: Develop our research tool	
2/17	<b>Due:</b> Report on practice (present in class)	
2/19	Knowledge: Loukissas visit	
2/24	Discussion: Knowledge: tacit or not	Polyani; Schmidt
2/26	Material turn: Experience, craft, and Creativity	Yair et al.; Ingold; Dormer; optional: Sennet
3/3	Catch up session	
3/5	<b>Due:</b> Report on experience <b>Assignment:</b> Design intervention	

	<b>Assignment:</b> Final paper	
3/10	Design session in class	
3/12	<b>Due:</b> Present your intervention design	
3/17	Spring Break	
3/19		
3/24	Material turn: Meaning of objects and tools	Csikszentmihaly/ Rochberg-Halton; Schneidermann et al.; Lingel/ Regan
3/26	Work on final project	
3/31	Work on final project	
4/2	Work on final project	
4/7	Work on final project <b>Due:</b> draft of paper	
4/9	Work on final project	
4/14	Work on final project	
4/16	<b>Due:</b> final presentation	
4/21	catch up session	
4/23	Course review <b>Due:</b> final paper	

## Grading

Report on Practice	Presentation; connection to theory and context; argument; cleanness of presentation	10%
Report on Experience	Presentation; connection to theory and context; argument; cleanness of presentation	10%
Development of project	Imagination; technical and design skill; development over time; documentation (!); final documentation and presentation	30%
Final paper	Logic of the argument; cross-referencing of texts discussed in class and texts beyond our class; proper formatting (ACM style); proper structure; the paper should be on the level of a graduate student conference submission	20%
Studio participation	Teamwork; participation in discussions; active and prepared in critiques;	30%

100-90% = A

89-78% = B

77-64% = C

63- = D

Grading of individual pieces will be in percentage

Late submissions are not accepted without appropriate excuse

## Workload and Technicalities

The course does not subscribe to any particular technology. Students will pick the appropriate tools and techniques in response to what they see fit for their intervention. However, some form of physical computing is to be expected (e.g. Arduino or Raspberry Pi) and students should be prepared to catch up on this area. There might be additional sessions on necessary hardware prototyping techniques, if necessary.

## Main Assignments

Report on practice: you identify a craftsperson and deliver an in-depth analysis of their practice – as observer; this will include (but might not be limited to) a documentation of what they do, their tools, their workshop, their materials, as well as an interview of the crafter to understand why they are doing this particular craft; you apply the techniques discussed in the course; you present your observations in the form of a short ppt presentation in class; you submit the ppt file on T-Square

Report on experience: you engage in the crafting practice yourself; it is important to differentiate this step from the first! You should not mix the observation stage with the personal experience stage; the report on this second stage is an own presentation that might include the object you created, a personal reflection on how it was done, what worked, what did not work; any detail of your personal encounter with that craft; you submit the presentation/ documentation on T-Square

Project: only after both observation phases are completed you should start the design and implementation of the final project, which is a digital response to the craft; the development process is an important part of this project and the outcome should be understood as a successful trace and validation of that process; the development process will be in 3 stages: first you present your design in class, then you deliver a working prototype, then you present your final project in class

Final Paper: you will deliver a final paper that critically examines the whole process from the different observation stages to the project design and implementation; length: about 6 pages in ACM format; you submit the paper on T-Square

## Working References

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