

Fashioning Circuits
EMAC 4372: Topics in Emerging Media and Communication
Fall 2013

These descriptions and timelines are subject to change at the discretion of the Instructor.



Course Information

Meets: TR 10am – 11:15am
Location: TBD
Credit Hours: 3

Contact Information

Instructor: Kim Knight
Email (preferred method of contact): kim.knight@utdallas.edu
Twitter: @purplekimchi
Phone: 972-883-4346. No voicemail, please.

Office: TBD
Office Hours:

- Kim's office hours
 - Drop In (no appointment necessary) : Tuesdays 4:30pm – 5:30pm
 - Schedule appointments via <http://doodle.com/purplekimchi>
- EMAC Lab hours?
 - additional assistance on coding and circuits is available in the EMAC Lab...

Course website: <http://fashioningcircuits.com>
Twitter tag: #fashioningcircuits

Course Description

Fashion and emerging media have more in common than one might think. Both are constantly in

flux and looking forward. Both are sites to negotiate and express identity. Both value originality, but also thrive on collaboration and appropriation. The two are explicitly combined in the realm of wearable media, which will be the main focus of this course. We will begin with a brief look at the history of fashion and its historical intersections with media and technology. We will then explore more contemporary areas of intersection centered on issues of identity and globalization. The final portion of the semester will be devoted to "learning by doing" in the production of socially-engaged and critically-informed wearable media projects. No sewing, electronics, or coding experience is necessary.

Course Goals

In this course, students will:

- Become familiar with the basic social and ethical issues that connect fashion and emerging media.
- Write critical analysis of fashion and media theories and practices.
- Become familiar with the basic concepts of electronic circuitry, wearable arduino hardware, and the arduino programming language.
- Produce two wearable media objects. No prior sewing, electronics, or coding experience required.

Required Textbooks and Materials

- Rebecca Arnold *Fashion: A Very Short Introduction* ISBN 978-0199547906
- Tony Olsson, David Gaetano, Samson Wiklund, Jonas Odhner, *OpenSoftwear*
 - 1st edition available as a free download at http://softwear.cc/book/files/Open_Softwear-beta090712.pdf
- All items from the following wishlist:
 - https://www.sparkfun.com/wish_lists/64326
 - Substitute any led color of your choice.
 - This is all of the electronic components you will need for your first wearable media project and all hands-on exercises. You may also be able to use much of this in your final project, particularly the Lilypad Simple board. However, you may need to purchase additional supplies to realize your vision.
- Fabric and other sewing materials, TBD

You will also need the following:

- a UTD email account (that you check frequently)
- a public Twitter account
- an account on <http://fashioningcircuits.pbworks.com>
- an account on <http://quizstar.4teachers.org>

Recommended Textbooks and Materials

- Michael Margolis, *Arduino Cookbook* ISBN 1449313876
 - the library has two electronic copies of this book

Course Policies

Attendance: It is important that you come to our meetings prepared and on time. To be “prepared” means that you have thoughtfully engaged with the reading and are prepared to discuss it, and that you have done any creative pre-work necessary. Bring questions, comments, observations, disagreements, examples, etc.

Because your presence is important, absences can negatively affect your grade. I do not differentiate between excused and unexcused absences. You are allowed to miss two classes (ie 1 week of class), for whatever reason, with no effect on your participation grade. Three or more absences will negatively impact your participation grade. sEight or more absences (ie missing 1 month of class) will, in most cases, result in a failing grade. Absences for religious purposes do not count against the permitted number (as long as prior notification is given). Lateness is also unacceptable; if you arrive more than thirty minutes late you will be marked as absent. Leaving more than 30 minutes early also counts as an absence. In addition, please try to be as fully present and engaged as possible – silence cell phones, don’t send or receive texts or emails, etc. Excessive distraction may be counted as an absence.

Accommodation: If you would like to request accommodation due to a disability, please let me know as soon as possible. The disability must be documented with the Office of Student Accessibility at UTD.

Online Due Dates: All online assignments are due by 11:59pm on the date listed, unless otherwise noted.

Late work: Late work will not be accepted. It is your responsibility to complete your work early enough to allow time for any technical difficulties.

Online Etiquette: Our many online assignments will require vigilance to ensure that we are always preserving an atmosphere of mutual respect. Disagreements may arise and consensus may not be possible. We can, however, respect each person’s right to an opinion. Name calling or menacing behavior will not be tolerated.

Academic Honesty: From the UT-D Handbook of Operating Procedures: “The university expects from its students a high level of responsibility with respect to academic honesty. Because the value of an academic degree depends on the absolute integrity of the work done by the student for that degree, it is imperative that a student maintain a high standard of individual honor in his

or her scholastic work. The dean may initiate disciplinary proceedings under subchapter C against a student accused of scholastic dishonesty upon complaint by a faculty member or a student.” (<http://www.utdallas.edu/dept/graddean/gspolDishonesty.htm>)

Academic dishonesty will be reported to the office of the Dean of Students and may result in disciplinary action by the university. If you have any questions regarding the proper use of outside sources or the distinction between sampling and plagiarism, I encourage you to meet with me.

University Policies: Please visit <http://go.utdallas.edu/syllabus-policies> for the University’s policies regarding all courses.

Course Requirements and Grading Policy

Grading Scale:

A Range: Excellent. All work is thought-provoking and well-executed.	B Range: Above Average. Most work is thought-provoking and well-executed.	C Range: Average. Most work is well-executed.	D Range: Poor. Work is often neither thought-provoking, nor well-executed.	F Range: Failing. Work fails to meet college standards.
A, A-	B+, B, B-	C+, C, C-	D+, D, D-	F

Assignments:

Participation – 30%

Participation includes attendance, in-class and online discussion, in-class quizzes, homework assignments, and sharing resources via Twitter.

Wearable Project 1 – 10%

Students will work individually to create a small-scale wearable media project from a pattern. The goal is to foster familiarity with electronics, coding, and sewing. Students will be evaluated on their willingness to experiment and the execution of the project.

Sewing & Electronics Exam – 10%

This in-class exam will cover the basics of electronic circuitry and machine sewing.

Arduino Exam - 10%

The second in-class exam will cover basic Arduino concepts related to sensors, actuators, and

basic code.

Case Study – 10%

To facilitate familiarity with the field and help seed ideas for the final project, students will write approximately 300 words describing and critically analyzing a wearable media object (art piece, consumer product, or DIY project). Students will add their case study to the course wiki and give a 7 – 10 minute presentation in which they summarize the object and their analysis.

Final Wearable Project - 30%

Students will work individually or in groups to create a larger-scale, final wearable media project. The goal with this project is to move beyond basic familiarity and produce a project that draws upon our readings and attempts to make an intellectual statement or social intervention. Students will be evaluated on the idea, execution, and relationship between form and idea. The final project will include a proposal and a short paper.

General Requirements: This class involves a lot of theoretical reading. My hope is that you will apply the ideas from that reading to the world around you. You will be most successful in this class if you are able to have an open mind and take a critical approach to our topics. Please note that being “critical” does not necessarily mean being negative, but it does mean that you are willing to question assumptions and explore the implications of the seemingly mundane and minute aspects of contemporary media culture. Openness to experimentation and play and a willingness to try and fail are critical to the study of emerging media. In short, in this class we will be enacting some of the very changes we are studying – collaborative learning, alternative models of scholarship, etc.

Schedule

Week 1: Introduction

Tuesday, August 27 - Introduction

Thursday, August 29 – Introduction to Lilypad Arduino

- Reading
 - *Open Softwear* Ch 3 “Software” and Ch 4 “Using the IDE”
- Homework
 - Install the arduino software on your computer; ensure you have the correct drivers for the lilypad

Week 2:

Tuesday, Sept 3 – Fashion, Clothing, and Cool

- Reading
 - Barnard, Malcolm. “Etymologies and Definitions of Fashion and Clothing” in *Fashion as Communication* 8 – 26 (17 pps)
 - Russell, Luke. “Tryhards, Fashion Victims, and Effortless Cool” in *Fashion: Philosophy for Everyone* 37 – 50 (14 pps)

- Case study

Thursday, Sept 5 – History of Fashion

- Reading
 - *Fashion: A Very Short Introduction*
 - Intro, Ch 1 – 3
- Case study

Week 3:

Tuesday, Sept 10 – History of Fashion

- Reading
 - *Fashion: A Very Short Introduction*
 - Ch 4 – 6, Conclusion
- Case study

Thursday, Sept 12 – Gender

- Reading
 - Entwistle, Joanne. “Fashion and Gender” in *The Fashioned Body* 140 – 180 (41 pps)
 - Liam Sullivan, aka Kelly, “Shoes” (NSFW)
 - <http://www.youtube.com/watch?v=wCF3ywukQYA>
- Case study

Week 4:

Tuesday, Sept 17 – Race

- Reading
 - Lev, Nadya, “I am so goth I was born black” on Coilhouse.net (access via Internet Archive)
 - <http://web.archive.org/web/20130116043655/http://coilhouse.net/2012/09/i-am-so-goth-i-was-born-black/>
 - Cultural appropriation
 - Cho, Margaraet, “Harajuku Girls”
 - <http://www.margarecho.com/2005/10/31/harajuku-girls/>
 - Stewart, Dodai, “On Miley Cyrus, Ratchet Culture, and Accessorizing with Black People”
 - <http://jezebel.com/on-miley-cyrus-ratchet-culture-and-accessorizing-with-514381016>
 - Breslaw, Anna “Vietnam and Its 'Exotic People' Are the New Black, According to Absurd Luxury Retailer Campaign”
 - <http://jezebel.com/5986439/vietnam-and-its-exotic-people-are-the-new-black-according-to-absurd-luxury-retailer-campaign>
 - See also: Johnny Depp in *The Lone Ranger*; that No Doubt video from earlier this year; a bunch of fashion spreads every season; a ton of movies from the 1980s; any Halloween superstore...

- Wilson, Elizabeth. Excerpt from “Oppositional Dress” in *Fashion Theory: A Reader* 253 – 255 (3 pps)
 - course reserves
- L'Heureux Lewis-McCoy, R. “Do Hoodies and Sagging Pants Deserve Justice?”
 - <http://www.ebony.com/news-views/do-hoodies-and-sagging-pants-deserve-justice#axzz2XiI1cWge>
- Case study

Thursday, Sept 19 – Sexuality

- Reading
 - Brennan, Samantha. “Fashion and Sexual Identity, or Why Recognition Matters” in *Fashion: Philosophy for Everyone* 120 – 134 (15 pps)
 - course reserves
 - Edwards, Tim. “Express Yourself: The Politics of Dressing Up.” in *Fashion in Focus* 103 – 119 (17 pps)
- Case study

Week 5

Tuesday, Sept 26 – Globalization

- Reading
 - Pierlott, Matthew. “Sweatshops and Cynicism” in *Fashion: Philosophy for Everyone* 169 – 185 (17 pps)
 - course reserves
 - Fahey and D'Innocenzio, “Retailers Face Tough Decision After Bangladesh Factory Collapse”
 - http://www.huffingtonpost.com/2013/05/12/retailers-bangladesh-factory_n_3262515.html
 - Bloeman, Shantha, dir., *T-shirt Travels: The Story of Secondhand Clothing and Third World Debt*
 - <http://www.youtube.com/watch?v=CeCIlgUeYIM&wide=1>
 - Calculate your slavery footprint
 - <http://slaveryfootprint.org/>
- Case study

Thursday, Sept 28 - Workshop

- Reading
 - *Open Softwear* “How Electricity Works” p 18-19
 - *Getting Started with Arduino* “What is Electricity?”
- In-class: repeat lilypad rapid prototyping or basic circuit exercise; use a multi-meter
 - concepts: Voltage, amperes, resistance, Ohm's Law

Week 6

Tuesday, Oct 1 – Cybercoutoure

Undergrad syllabus

- Reading
 - Quinn, Bradley. “Cybercouture” in *Techno Fashion* 77 – 96 (20 pps)
 - **course reserves**
 - Pederson, Isabel. “MyLifeBits, Augmented Memory, and a Rhetoric of Need” in *Continuum: Journal of Media & Cultural Studies*.
 - <http://libproxy.utdallas.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ufh&AN=31768664&site=ehost-live>
 - (you will need to sign into the library by proxy or be on campus to access)
 - Playlist of Hussein Chalayan dresses
 - http://www.youtube.com/playlist?list=PLUgwqdOf_HHyA5jjaTzT5DIkF0PXzuQn4
- Case study

Thursday, Oct 3 – Workshop

- Reading:
 - How to Sew (using a sewing machine)
 - <http://www.instructables.com/id/How-to-Sew-using-a-sewing-machine/?ALLSTEPS>
- In-class: introduction to the sewing machines
 - parts of the machine; threading the machine; seating the bobbin; raising / lowering the needle; stitch selection

Week 7

Tuesday, Oct 8 – Sewing & Electronics Exam

Thursday, Oct 10 – Project Workshop

- Reading
 - *Open Softwear* pps 76 – 82, 94 – 97
 - Basic structure, variables, void setup, void loop, brackets, semicolons, commenting code, variables types and declarations, the digital pins, the analog pins
- In-class
 - sketch components; sew soft circuits using LilyTiny board, battery holder, and LEDs

Week 8

Tuesday, Oct 15 – Project Workshop

- In-class
 - continue sewing soft circuits; begin sewing wrist cuff

Thursday, Oct 17 – Project Workshop

- In-class
 - finish sewing wrist cuff

- Wearable Media Project 1 due

Midterm grades: October 18

Week 9:

Tuesday, Oct 22 – Blogs & Videos

- **Final Project proposal due**
- Reading
 - Browse all of the following
 - Threadbared
 - <http://iheartthreadbared.wordpress.com/>
 - Broadist
 - <http://www.broadist.com/>
 - Glitter Politic
 - <http://glitterpolitic.tumblr.com/>
 - ReFashionista
 - <http://refashionista.net/>
 - Of Another Fashion
 - <http://ofanotherfashion.tumblr.com/>
 - DapperQ
 - <http://www.dapperq.com/>
 - Khrais, Reema. “Showing Off Shopping Sprees, Fashion “Haulers” Cash In Online”
 - <http://www.npr.org/2013/03/14/174305909/showing-off-shopping-sprees-fashion-haulers-cash-in-online>
 - Search for makeup, diy clothing, fashion, or cosplay tutorials on YouTube
 - Tweet a link to one to share and discuss with the class

Thursday, Oct 24 – Workshop – buttons & switches

- Reading
 - Coleman, E. Gabriella. Excerpt from “The Craft and Craftiness of Hacking” in *Coding Freedom*, pps 105 – 122 (start at heading *Communal Populism and Individual Elitism*)
 - course reserves
- In-class
 - add button or switch to soft circuit

Week 10:

Tuesday, Oct 29 – Apps & Networked Fashion

- Reading
 - Silverman, Lauren. “SXSW: Where High Tech Meets High Fashion” *Art + Seek*
 - <http://artandseek.net/2013/03/13/sxsw-where-high-tech-meets-high-fashion/>

- Cardellino, Carly. “10 Fashion and Beauty Apps You Need to Try”
 - <http://www.cosmopolitan.com/hairstyles-beauty/skin-care-makeup/fashion-and-beauty-apps-worth-downloading>
- Saraswathy, M. “Tech Couture: Fashion Keeps a Date with Augmented Reality”
 - http://www.business-standard.com/article/companies/tech-couture-fashion-keeps-a-date-with-augmented-reality-112031200093_1.html
- Epps, Sarah. “The App Wars Come to Wearables”
 - <http://readwrite.com/2013/06/04/the-app-wars-come-to-wearables-consumers-will-be-the-winners#awesm=~oahaedKhGuDmZs>
- Dicker, Ron. “Durex Vibrating Underwear, “Fundawear,” Enables Phone Sex via iPhone App” (Video is NSFW)
 - http://www.huffingtonpost.com/2013/04/19/durex-vibrating-underwear_n_3116777.html
 - Durex Fundawear – The Fashion
 - http://www.youtube.com/watch?v=KHRpJXRwdXk&feature=share&list=PLWzUm_Nmh7e1hFjLQOwpK4JBLroyH4cQQ
 - Durex Fundawear – The Technology
 - http://www.youtube.com/watch?v=T6vul95hwOY&feature=share&list=PLWzUm_Nmh7e1hFjLQOwpK4JBLroyH4cQQ
- “Now, Lingerie Equipped with GPS System to Fight Sexual Crimes”
 - <http://www.indiatimes.com/news/more-from-india/now-lingerie-equipped-with-gps-system-to-fight-sexual-crimes-69421.html>
- “GPS Bracelet for Aid Workers: Natalia Project”
 - <http://postscapes.com/gps-bracelet-for-aid-workers>
 - read brief article and watch video
- Case study

Thursday, Oct 31 – Workshop – LEDs Beyond Blinking

- Reading
 - “Troubleshooting” from *Getting Started with Arduino*
 - *Open Softwear* Ch 9, 85 – 94
 - Doing Math, Logical Comparisons, Logical Operators, Constants
 - *OpenSoftwear* Ch 5, section “Soft prototyping with LEDs” pps 37 - 41
- In-class
 - tri-color LEDs; serial vs. parallel LEDs; fade and forloopiteration;

Week 11:

Tuesday, Nov 5 – Smart Textiles

- Reading
 - Quinn, Bradley, *Textile Futures: Fashion, Design, and Technology*

- excerpt from “Vital Signs” 85 – 102 (18 pps)
- excerpt from “Surfaces” 61 – 73 (13 pps)
- **course reserves**
- Case study

Thursday, Nov 7 – Workshop – light & temperature sensors

- Reading
 - *OpenSoftware* Ch 9, section “Types” pps 82 – 85
 - *OpenSoftware* Ch 6 “Using Analog Pins”
- In-class
 - code for light and temperature sensors; if and if else; Other types of variables

Week 12:

Tuesday, Nov 12 – Workshop – vibe boards & buzzers

- Reading
 - Johanna Blakely, “The Lessons from Fashion's Free Culture”
 - http://www.ted.com/talks/lang/en/johanna_blakley_lessons_from_fashion_s_free_culture.html
- In-class
 - using buttons and switches; connect to temperature or light sensor

Thursday, Nov 14 – Workshop – serial monitor

- Reading
 - “10 Conductive Thread Tips”
 - <http://www.adafruit.com/blog/2013/01/02/10-conductive-thread-tips-wearablewednesday/>
- In-class
 - `serial.print` and `serial.println`; work with temperature and light sensors

Week 13

Tuesday, Nov 19 – Workshop – input via serial communication

- Reading
 - TBD
- Homework
 - Complete
- In-class
 - connecting to RSS feeds, social media, etc.

Thursday, Nov 21 - Arduino Exam

Nov 25 – 29: Fall Break

Week 14:

Tuesday, Dec 3 – Project workshop

Thursday, Dec 5 – Project workshop

Week 15:

Tuesday, Dec 10 – Project workshop

Final Exam Period TBD – Presentation of Wearable project 2