

MHS 242: Bionic Bodies, Cyborg Cultures:

technology, art, and disability cultures

TTh 11-12:15 p.m.

Calhoun 203

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Course description:

In a world of rapidly-developing technologies, our bodies are increasingly subject to technological manipulation and enhancement. Some historians and cultural critics have even suggested that we are living in the age of the posthuman, in which complex interfaces between our bodies and technologies have become inevitable. From high-tech prosthetic limbs to the phenomenon of bio-hacking, these bodily interactions with tools and machines are making possible capabilities that far exceed the typical functions of human bodies. Still others--most notably disabled people and disability activists--have argued that such technological interfaces are as old as human tool use itself. What is interesting about these technologies, they argue, is not the sensationalized possibility of full-fledged cyborgs reported in tech media or the ways that technologies create super-normal humans, but rather the role of technologies in erasing human variation or, alternatively, contesting the very idea of the normal itself, creating culture and modes of interaction that are unique to disability community.

In this class, we will ask how the development of what we will call assistive and adaptive technologies challenges the way we think about normal human bodies and their capacities. How does technology mediate the interactions between bodies, power, politics, and social and cultural norms? What ethical questions do new technologies raise? How have disabled inventors and users of technology used their own resourcefulness, ingenuity, and expertise to create new forms of adaptive technology? How do disabled people use technology to craft community, art, aesthetics, and fashion? What is our own relationship to disability, and therefore, to technology? We will address these questions through a number of texts, web objects, films, images, art and design practices, and studies of technologies. In particular, we will draw as much upon academic writing as we will draw upon the technological products of disability culture: Youtube videos, blog posts, DIY inventions, disability art and fashion, and so on. In doing so, we will question our common understandings of concepts such as body, disability, technology, enhancement, function, fashion, and aesthetics. Taking a page from the maker and hacker movements, we will also explore these concepts through

iterative design projects, culminating in final projects at the end of the semester. Students will leave the course with an understanding of the critical literatures on adaptive technologies, as well as a creative understanding of the worldbuilding practice of design.

Required texts:

Graham Pullin, *Design Meets Disability* (MIT)

Katherine Ott, David Serlin, and Stephen Mihm, *Artificial Parts, Practical Lives* (NYU)

The remainder of the readings are on e-reserves or online

Supplies and other things you should have:

1. Technology: In addition to OAK, we will be using Google and Twitter accounts. Feel free to bring laptops and tablets to class if you can use them while being present and participating. This means that you must be using your laptop to participate in class, rather than to look at Facebook, do online shopping, or chat with your friends. If I suspect that you are not paying attention (I can always tell), your participation grade will be docked. Use of cell phones is not permitted.

2. Sketchbook: each student must have a sketchbook, either in paper or electronic form. We will be doing activities in our sketchbooks to turn in periodically. These activities will include taking notes, drawing, diagramming, and doodling as we engage in various learning and design activities. For paper sketchbooks, I recommend something unlined, along with pens, colored pencils, markers, or any other non-messy writing tools (avoid paint). For students trying out electronic doodling, I recommend apps such as Paper for iPad and Google Drawing for the computer. Whatever the format, make sure it is shareable so that you may turn in your assignments. All entries must be dated.

Grading:

Participation and attendance: 30%

Regular class attendance and real-time participation, including speaking in class, asking questions, Tweeting key points and questions, submitting to our Tumblr (<http://accessvanderbilt.tumblr.com>), participating in group work, and showing evidence of having done the readings. Each student must sign up to be a class note-taker for one class period. We will post these notes on a shared Google Docs account in Word and Google Docs formats. Our Twitter hashtag will be: #criticaldisabilitytech

Sketchbook: 10%

Each student will turn in sketchbook assignments as indicated on the syllabus, either electronically or on paper. These will be graded for consistency and creativity. Use

these spaces to take notes, draw diagrams, work on your design charrette, paste images that you find, and so on.

Essays: 30%

Each student will complete a series of critical writing essays over the course of the semester. Each essay will be between 2-5 paragraphs, 400-750 words.

Final project: 30%

Students will have the choice of an individual research paper or group design project. These will be presented at a mandatory student conference at the end of the semester on November 18-20. **Enrolling in the course means that you are able to attend this mandatory event.**

Grading scale:

NO LATE WORK ACCEPTED

A: 95+	B+: 87-89	C+: 77-79	F: 69 and below
A-: 90-94	B: 83-86	C: 73-76	
	B-: 80-82	D: 70-72	

Course rules and guidelines:

1. Attendance policy: Attendance is **mandatory**. After two absences, you will lose 5 points per class from your participation grade. Beyond this, excused absences include severe illness, family emergencies, or attendance at school-sponsored competitive activities, but documentation is required. Unexcused absences will count against the final participation grade.
2. Critical thinking: This course will foremost test your ability to integrate a critical lens into your thinking. You will be graded on how well you incorporate theories and perspectives from class into your comments and writing. This means that even if you speak a lot in class, but have not incorporated these perspectives, your grade will reflect that. Likewise, if you speak succinctly and less often but demonstrate that you have integrated these critical thinking skills and perspectives, your grade will reflect that.
3. Reading and class participation constitute a large percentage of your grade. I expect each student to prepare to be engaged in the class discussion and to bring readings to class. Alternative modes of participation are available with instructor approval.
4. LATE WORK POLICY: You must submit all assignments on time. If an excused absence interferes with turning in an assignment, students must arrange to turn it in early. Unexcused late work will receive a 20 point deduction for each day it is late.
5. Food and drink are permitted in class as long as they are not distracting and students take care of cleaning up their space and disposing of trash. Please do not bring

allergenic foods such as nuts to class.

6. Laptops, iPads, Kindles, etc. are allowed in class to display the readings, Tweet questions, and work on design projects. Texting or using the internet for non-class activities, such as Facebook or checking email, is not allowed and will lower your participation grade. Cell phone use is **not** permitted.

7. Style guide: All papers must be typed, using Times New Roman or Arial font, size 10-12, 1-inch margins, left justified, footnotes and in-text citations.

8. Participation in intellectual community: In this course, our focus is on scholarly theories, rather than personal opinions. Appropriate behavior includes supporting, contesting, and debating these theories using scholarly evidence and references to our readings. Inappropriate behavior includes personal attacks, offensive language, and hate speech.

Accessibility and accommodations:

Let's talk about how we can create access together, collectively. I am committed to creating an accessible classroom in which information is presented in multiple modes to account for differences in learning styles, sensory capabilities, and physical access.

Please let me know if there is a way I can make the classroom more accessible. If you need course accommodations due to a disability, if you have emergency medical information to share with me, or if you need arrangements in case the building must be evacuated, please make an appointment with me and/or the Office of Equal Opportunity, Affirmative Action, and Disability Services [(615) 322-4705] as soon as possible. For students requesting accommodations from the Disability Services Program, see Vanderbilt's Reasonable Accommodations Request Process:

http://www.vanderbilt.edu/ead/ds_students.html or call the number above.

Honor Code:

All students are bound by Vanderbilt's Honor Code as outlined in the Student Handbook (http://www.vanderbilt.edu/student_handbook/the-honor-system#honorcode).

Plagiarism, cheating, submission of work produced for another course, and the use of texts or images produced by other agents will not be tolerated, will result in an immediate failing grade for the assignment, and will result in the student being reported to the Honor Council. Students are expected to provide proper citations for all work.

Please see me if you have any questions about this. Enrolling and participating in this class constitutes consent to all rules and procedures outlined above.

Schedule of readings

August 21 - Introduce syllabus

August 26 (T) - *Introduction to the course*

In class:

—Introducing Access Vanderbilt tumblr (<http://accessvanderbilt.tumblr.com/>)

—Video: Amputee OT, “Timelapse video of a woman making her own prosthetic leg from LEGO pieces,”

http://dangerousminds.net/comments/timelapse_video_of_a_woman_making_prosthetic_leg_from_legos

Unit 1: Disability theories and cultures

August 28 (Th) - *Introducing disability and technology*

Sketchbook homework due today: Journal, doodle, or diagram about your relationship with technology.

— *Fixed* documentary (in class)

--Browse “Autobiography Through Technology” series on Cyborgology:

<http://thesocietypages.org/cyborgology/2014/01/02/autobiography-through-devices-part-2/>.

September 2 (T) - *Disability Studies and Crip Theory*

--Rosemarie Garland-Thomson, “The Case for Conserving Disability,” *Journal of Bioethical Inquiry* (2012): 339-355. (OAK)

--David Mitchell and Sharon Snyder, “Introduction: Cultural Locations of Disability,” *Cultural Locations of Disability* (2006): 1-35. (OAK)

--Sara Cantor, “Falling Without Getting Hurt: Adventures in Disability,” December 10, 2013, <http://the-toast.net/2013/12/10/adventures-in-disability/>.

—Alison Kafer, “Introduction,” *Feminist Queer Crip* (OAK and accessible as e-book through library website)

--In class: Youtube: “Examined Life: Judith Butler and Sunaura Taylor,”

<http://www.youtube.com/watch?v=k0HZaPkF6qE>.

September 4 (Th) - *Disability and language*

--John Folkins, “Resource on Person-First Language,” December 1992.

http://www.asha.org/publications/journals/submissions/person_first/.

--Lisa Egan, “I’m not a ‘Person with a Disability’: I’m a Disabled Person,” November 9, 2012, <http://www.xojane.com/issues/i-am-not-a-person-with-a-disability-i-am-a-disabled-person>

--Lydia Brown, "Ableism/Language," April 2014.

<http://www.autistichoya.com/p/ableist-words-and-terms-to-avoid.html>.

--Lalvani, P. & Broderick, A. Institutionalized Ableism and the Misguided "Disability Awareness Day," *Equity and Excellence in Education*, (2013): 468-483.

https://www.academia.edu/6314724/Lalvani_P_and_Broderick_A_2013_Institutionalized_Ableism_and_the_Misguided_Disability_Awareness_Day_Transformative_Pedagogies_for_Teacher_Education.

--Stella Young, "I'm not your inspiration, thank you very much," *TED Talk*, April 2014, http://www.ted.com/talks/stella_young_i_m_not_your_inspiration_thank_you_very_much.

--Rachael Cohen-Rottenberg, "Doing Social Justice: 10 Reasons to Give Up Ableist Language," *Huffington Post* 6/10/2014,

http://www.huffingtonpost.com/rachel-cohenrottenberg/doing-social-justice-thou_b_5476271.html.

--In class: Amanda Baggs, "In My Language,"

<https://www.youtube.com/watch?v=JnylM1hl2jc>.

Essay #1 Due Monday, September 8, 5 p.m. - Relationship to technology

September 9 (T) - *Disability aesthetics (1)*

--Graham Pullen, "Preface," *Design Meets Disability*.

---Stephen Mihm, "A Limb Which Shall be Presentable in Polite Society: Prosthetic Technologies in the Nineteenth Century," *Artificial Lives, Practical Parts*.

--Jene Gutierrez, "Prosthetic Limbs as Art," November 18, 2013,

<http://beautifuldecay.com/2013/11/18/prosthetic-limbs-art-sophie-de-oliveira-baratas-alternative-limb-project/>.

--In class: Full Radius dance, "Walking on My Grave,"

<http://www.youtube.com/watch?v=6O5d5hgxa5k>.

--Lisa Bufano, "Artist Takes Inspiration from Amputation,"

<http://www.npr.org/templates/story/story.php?storyId=7728628>.

--Aimee Mullins, "My 12 Pairs of Legs," *TED Talk*,

http://www.ted.com/talks/aimee_mullins_prosthetic_aesthetics.html

September 11 (Th): *Disability aesthetics (2) - Guest Speaker: Sandie Yi*

—Sandie Yi, "Crip Couture,"

<http://bitchmagazine.org/post/tales-from-the-crip-crip-couture-Sandie-Yi-art-wearable-art>

--Sandie Yi, *Crip Couture Slides* (OAK)

--Graham Pullin, "Fashion Meets Discretion," *Design Meets Disability*.

--Jessica Probus, "This Woman is Taking On Disability Stigma With a Purple Cane and a Petition," *Buzzfeed*, July 10, 2014,

<http://www.buzzfeed.com/jessicaprobus/this-woman-is-taking-on-disability-stigma-with-a-purple-cane>.

--Youtube: Pro Infirmis, "Because who is perfect?",

<http://www.youtube.com/watch?v=E8umFV69fNg>.

--Kristen Gardner, "From Cotton to Silicone: Breast Prosthesis before 1950," Artificial Parts, Practical Lives.

September 16 (T): Access and Accessibility

—Graham Pullin, Preface, "Introduction," and "Simple Meets Universal," Design Meets Disability.

—Tanya Titchkosky, "Introduction: Access as an Act of Perception," The Question of Access (2011) (OAK)

--Mia Mingus, "Reflections on an Opening," 8/23/2010,

<http://leavingevidence.wordpress.com/2010/08/23/reflections-on-an-opening-disability-justice-and-creating-collective-access-in-detroit/>

--Bess Williamson, "The People's Sidewalks," Boom Spring 2012,

<http://www.boomcalifornia.com/2012/06/the-peoples-sidewalks/>.

—In class: Morgan's Wonderland

September 18 (Th) - Design day (1)- Evaluating Access

--Alison Kafer, "Accessible Futures, Future Coalitions," from Feminist Queer Crip (OAK)

--Abir Mullick, "Public Bathroom for Universal Access," The Trellis, June 2011 (OAK)

Audit results due Monday, September 22, 5 p.m.

Unit 2: Technology and Technoscience

September 23 (T) - Theories of Technology

SKETCHBOOKS DUE!

--XKCD, "Simple Answers," <http://xkcd.com/1289/>

---Katherine Ott, "The Sum of Its Parts: An Introduction to Modern Histories of Prosthetics," Artificial Parts, Practical Lives.

--Sara Hendren, "All Technology is Assistive Technology: six dispositions for designers on disability," <https://medium.com/thoughtful-design/a8b9a581eb62>

--Rebecca Rosen, "Why are Glasses Perceived Differently than Hearing Aids?," The Atlantic, 12/3/2013

<http://www.theatlantic.com/technology/archive/2013/12/why-are-glasses-perceived-differently-than-hearing-aids/282005/>.

—Elspeth Brown, "The Prosthetics of Management: Motion Study, Photography, and the Industrialized Body in World War I America," Artificial Lives, Practical Parts.

—Nelly Oudshoorn and Trevor Pinch, "How Users and Non-Users Matter," How Users

Matter: the co-construction of users and technology.

September 25 (Th) - *Ways of Moving*

--Kelly Fritsch "Beyond the Wheelchair: Rethinking the Politics of Disability and Accessibility," <http://briarpatchmagazine.com/articles/view/beyond-the-wheelchair>
—Graham Pullin, "If Jasper Morrison Met Wheelchairs," "Tomoko Azumi Meets Step Stools," and "Vexed Meets Wheelchair Capes," *Design Meets Disability*.
--Sara Hendren, Slope Intercept (<http://slopeintercept.org/>)
--Sara Hendren, "The White Cane as Technology," November 6, 2013, <http://www.theatlantic.com/technology/archive/2013/11/the-white-cane-as-technology/281167/>
—Sara Hendren, "Adaptive Hacks: A cane meets a bike," <http://ablersite.org/2014/06/24/adaptive-hacks-a-cane-meets-a-bike/>
—Japan Times, "Bike Can Turn into a Wheelchair if Disaster Strikes," <http://www.japantimes.co.jp/news/2014/04/11/national/bike-can-turn-into-wheelchair-if-disaster-strikes/#.U6njSy8WfdD>.
In class: Sue Austin, "Deep Sea Diving...In a Wheelchair," https://www.ted.com/talks/sue_austin_deep_sea_diving_in_a_wheelchair.

September 30 (T) - *Ways of Knowing*

—Pullin, "Feeling Meets Testing," "Expression Meets Information," and pgs. 232-236, 238-265, 266-287, *Design Meets Disability*.
—Katherine Ott, "Hard Wear and Soft Tissue: Craft and Commerce in Artificial Eyes," *Artificial Parts, Practical Lives*.
—Sara Hendren, The Cane Camera, <http://ablersite.org/2013/05/11/cane-camera/>.
—Sara Hendren, Perkins School for the Blind, <http://ablersite.org/2013/10/31/perkins-school-for-the-blind-investigating-normal-week-3/>
—Michael Finkel, "The Blind Man Who Taught Himself to See," <http://www.mensjournal.com/magazine/the-blind-man-who-taught-himself-to-see-20120504>

—In class: The Eyeborg Documentarian (<http://ablersite.org/2011/08/30/deus-ex-the-eyeborg-documentarian>); youdescribe.org, <http://www.touchgraphics.com/>.

October 2 (Th) - *Design day (2)-Fashioning Assistive Technology*

October 7 (T) - *Cyborg theory*

--Donna Haraway, "Cyborg Manifesto,"

<http://www9.georgetown.edu/faculty/irvinem/theory/Haraway-CyborgManifesto.html>

—Cassandra Crawford, “Introduction,” *Phantom Limb: Amputation, Embodiment, and Prosthetic Technology*, 2014 (OAK).

--Ben Popper, “Cyborg America,” *The Verge*, 10/8/2012,

<http://www.theverge.com/2012/8/8/3ckers-grinders-body-hackers177438/cyborg-america-bioha>.

--Adam Clark, “How Close Are We to Building a Full-Fledged Cyborg?,” 10/21/13,

<http://gizmodo.com/how-close-are-we-to-building-a-full-fledged-cyborg-1443146375>

October 9 (Th) - *Crippling Cyborg theory*

--Graham Pullin, “Identity Meets Ability,” *Design Meets Disability*.

--Alison Kafer, “The Cyborg and the Crip: Critical Encounters,” *Feminist Queer Crip*. (OAK)

--Sonum Panesar and Gregor Wolbring, “Analysis of North American Newspaper Coverage of Bionics Using the Disability Studies Framework,” *Technologies 2* (2014) (OAK)

Essay #2 Due Monday, October 13, 5 p.m. —Representations of assistive technology

October 14 (T) - *Disability Maker Cultures*

- SKETCHBOOKS DUE!

--Bess Williamson, “Electric Moms and Quad Drivers: People with Disabilities Buying, Making, and Using Technology in Post-war America,” *American Studies* 52:1 (2012): https://www.academia.edu/2100311/Electric_Moms_and_Quad_Drivers_People_with_Disabilities_Buying_Making_and_Using_Technology_in_Postwar_America.

--NPR, “3D Printer Brings Dexterity to Children with No Fingers,”

<http://www.npr.org/blogs/health/2013/06/18/191279201/3-d-printer-brings-dexterity-to-children-with-no-fingers>.

--Browse <http://www.openprosthetics.org/> and <http://www.diyability.org/>.

—In class: 19th and 20th century prosthetics design

October 16 (Th) - No class - Fall break

Unit 3: Critical and Interrogative Design

October 21 (T) -*Building Bodies*- Joint meeting with Prof. MacLeish’s War and the Body class - STEVENSON CENTER 2212

- FINAL PROJECT PROPOSALS DUE

--Life and Limb Online exhibit:

<http://www.nlm.nih.gov/exhibition/lifeandlimb/exhibition.html>

—"Rebuilding Body and Spirit,"

<http://www.amednews.com/gallery/MN/20080818/health/818009999/1#galtop>.

---David Serlin, "Engineering Masculinity: Veterans and Prosthetics after World War II," *Artificial Parts, Practical Lives*.

—Jennifer Davis McDaid, "How a One-Legged Rebel Lives: Confederate Veterans and Artificial Limbs in Virginia," *Artificial Parts, Practical Lives*.

October 23 (Th) - Guest Speaker: Robert Sacks - *Disability, Technology, and Modern Warfare*

Readings: MacLeish, "Heat, Weight, Metal, Gore, Exposure," from *Making War at Fort Hood* (OAK).

Week of October 27-31: All students must sign up for office hours to discuss final projects.

October 28 (T) - *Critical design and disability* — Guest speaker: Sara Hendren

--"Inside the Prosthetic Imaginary: an interview with Sara Hendren," *Rhizome* 2012.

<http://rhizome.org/editorial/2012/oct/4/inside-prosthetic-imaginary-interview-sara-hendren/>.

—Accessible Icon Project

—Sara Hendren, "Against Re-Branding, Against Placebo Politics,"

<http://ablersite.org/2014/03/05/against-re-branding-against-placebo-politics/>.

—Pullin, "Exploring Meets Solving" and "Provocative Meets Sensitive," *Design Meets Disability*.

—Tim Maly, "Pretty Ramp Machine," *Medium*.

<https://medium.com/weird-future/pretty-ramp-machine-9caa2588d7ac>.

—Sara Hendren, "Unknown Armature,"

<http://ablersite.org/2013/06/04/hiding-in-plain-sight/>.

October 30 (Th) - *Technology and disability culture*

In class: *Switched at Birth*

—Graham Pullin, "Identity Meets Ability," *Design Meets Disability*.

Essay #3 Due Monday, November 3, 5 p.m. - Primary Source assignment

November 4 (T) - *Technology and Autistic culture*

—Jim Sinclair, "Don't Mourn for Us," *Loud Hands: Autistic People, Speaking*.

—Sara Hendren, “Hiding in Plain Sight,”

<http://ablersite.org/2013/06/04/hiding-in-plain-sight/>.

--Judith Newman, “To Siri, With Love” New York Times, October 17, 2014,

http://www.nytimes.com/2014/10/19/fashion/how-apples-siri-became-one-autistic-boys-bff.html?smid=tw-nytimes&_r=2.

—Browse: <http://tinygracenotes.blogspot.com/>; www.autistichoya.com/;

<http://aspierhetor.com/>; <http://neuroqueer.blogspot.com/>.

November 6 (Th) - *Workshopping papers*

Bring your thesis, project idea, etc. to class and we will work on it together.

November 11 (T) —*Design Day 3 - Wearable Technology - Guest speaker: Maria Town*

[-http://cpshoes.tumblr.com/](http://cpshoes.tumblr.com/)

November 13 (Th) - Conference check-in and preparation

November 18 (T) - No class - Conference

November 20 (Th) - No class - Conference

November 22-30 - No class - Thanksgiving break

December 2 (T) - *Post-conference recap/ Design Day 4*

December 4 (Th)- *Last class - Final sketchbook turn-in*

Final projects due: TBA