Introduction to Accessibility in the World and on the Web
Course Syllabus, 2.3, last revised 6/9/2021
* Note that this syllabus is subject to change. Students will be notified about any changes.

Course Logistics
Meeting Times:
- M/T/Th/F mornings: 11:30am EST
- T/Th afternoons 2:30pm EST

Meeting Location:
- Zoom, see Canvas for links to class sessions

Instructor Information
Instructor: Sarah Morrison-Smith, PhD
- E-mail address (preferred):   smorriso@barnard.edu (put "PCP" in the subject)
- Office location: Zoom only
- Class Web site: Canvas only

I welcome you to contact me outside of class and office hours and I especially invite you to contact me if you find yourself spending a lot of time without making any progress. To make an appointment, sign up for a time slot on Calendly (link below) and include your meeting goals, any relevant questions, and at least 3 proposed meeting times.

TA: Gala Kalevic
- E-mail address (preferred):   gk2515@barnard.edu
- Office location: Zoom only

Office Hours
Student hours can be scheduled via Calendly (https://calendly.com/pcp-accessibility) from :
- **2:00pm – 4:30pm EST on Mondays** (Instructor)
- **1:00pm – 3:00pm EST on Wednesdays** (TA)
- **2:00pm – 3:00pm EST on Fridays** (TA)

Student hours must be scheduled **at least 30 minutes in advance**. Additional hours can be scheduled by email. When requesting additional hours, **please specify at least 3 times when you are available**. **Students who are more than 5 minutes late to office hours and appointments will need to reschedule.**

Course Information
Prerequisites:
None

Catalog Descriptions:
Introduction to access technology and the development of accessible systems. In this course, students learn about and evaluate various access technologies. Topics include: web accessibility ,

screen readers, alternative input, technology for language disorders, and ethics. This course teaches students the deep inner workings of today's user interface technology and serve as a guide for building the user interfaces of the future.

Course Overview:

This is a summer course that introduces students to Access Technology (AT) and web accessibility. **This class is based on the belief that everyone has the capability to design effective technology.** Access technology, technology that makes accessible what otherwise isn't, has the potential to increase autonomy and improve millions of people's ability to live independently. This potential is currently under-realized because the expertise needed to create the right AT is in short supply and the custom nature of AT makes it difficult to deliver inexpensively.

This course teaches how AT is built to work within the tough technical and human constraints in which it must operate. As early adopters, people with disabilities have inspired a host of future user interface technologies, e.g., conversational assistants, text-to-speech, speech recognition, optical character recognition, predictive typing, tactile displays, etc. People with disabilities continue to be the first users of interface next-generation technologies that are gradually adopted widely. This course does not only teach you the deep inner workings of today's user interface technology but also serves as a guide for building the user interfaces of the future. **Topics include: web accessibility, screen readers, alternative input, technology for language disorders, and ethics.**

In this class, you'll be exposed to a wide range of interactive accessible technology, learn how it is built, and practice building accessible web pages using HTML and CSS. This is directly beneficial if you want to have impact in this important area, and broadly beneficial to anyone who wants to build interactive systems. **No prior experience with HTML or CSS is necessary, though it is beneficial.**

Course Components:

This course involves the following components:
- Lectures: core information about AT will be presented, discussed.
- Readings: research papers and other readings will be assigned and discussed.
- Assignments: these will be meant to introduce you to AT, ethics, and disability studies.

Learning Outcomes:

By the end of this course, students will be able to:
- *Design and build* accessibile websites
- *Characterize* access technology
- *Assess* access technology evaluations and other disability studies

Course Materials

Textbooks Required:

There are no textbooks required for this course. All course readings will be made available on Canvas.

Software Required:

There is no software required for this course. All coding will be done using online web editors.

Course Outline

Tentative Schedule: subject to change

Week	Day	Topics
1A	M	• Lecture: Introduction and Syllabus • Discussion: Icebreakers
1B 1C	T	Afternoon • Lecture: Introduction to Accessibility • Discussion: Access technology Afternoon • Lecture: Web Accessibility 1 • Discussion: Accessibility, responsibility • Discussion: Assignment 1 Q&A
1D 1E	Th	Morning • Lecture: Web Accessibility 2 • Discussion: *The Effects of "Not Knowing What You Don't Know"* • Lab 1: WAVE Afternoon • Lecture: Introduction to HTML & CSS • Demo: Introduction to HTML & CSS
1F	F	• Lab 2: HTML & CSS
2A	M	• Assignment 1 Presentations • Assignment 1 Due in class
2B 2C	T	Morning • Lecture: Screen Readers 1 • Discussion: *Towards making mathematics a first class citizen in general screen readers* Afternoon • Lecture: Screen Readers 2 • Demo: Screen Readers
2D 2E	Th	Morning • Lecture: Computer Input • Discussion: Assignment 2 Q&A Afternoon

		• Lecture: Ethics in Computer science • Discussion: Ethics
2F	F	• Lecture: Language Disorders 1 • Discussion: *Dyslexia and web accessibility: synergies and challenges* • Assignment 2 Due 11:59pm EST
3A	M	• Lecture: Language Disorders 2 • Lab 3: Designercize Brainstorming Challenges
3B 3C	T	Morning • Lecture: Video Games and Accesibility 1 • Discussion: *The RAD: Making Racing Games Equivalently Accessible to People Who Are Blind* Afternoon • Lecture: Video Games and Accesibility 2 • Discussion: Assignment 3 Q&A
3D 3E	Th	Morning • Lecture: Computer Vision 1 • Discussion: *Supporting Everyday Activities for Persons with Visual Impairments Through Computer Vision-Augmented Touch* Afternoon • Lecture: Computer Vision 2 • Discussion: *People with Visual Impairment Training Personal Object Recognizers: Feasibility and Challenges.*
3F	F	• Lecture: Mental Health • Discussion: Class wrap up and final thoughts • Assignment 3 Due 11:59pm EST

Reading List

Week	Readings (available on Canvas and the ACM Digital Library, to be discussed in class the week of)
1	**Jeffrey P. Bigham**, **Irene Lin**, and **Saiph Savage**. 2017. *The Effects of "Not Knowing What You Don't Know" on Web Accessibility for Blind Web Users*. In Proceedings of the 19th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '17). ACM, New York, NY, USA, 101-109. DOI: https://doi.org/10.1145/3132525.3132533. 9 pages
2A	**Volker Sorge**, **Charles Chen**, **T. V. Raman**, and **David Tseng**. 2014. *Towards making mathematics a first class citizen in general screen readers*. In Proceedings of the 11th Web for All Conference (W4A '14). ACM, New York, NY, USA, , Article 40 , 10 pages. DOI: http://dx.doi.org/10.1145/2596695.2596700. 10 pages

2B	**Luz Rello**. 2015. *Dyslexia and web accessibility: synergies and challenges*. In Proceedings of the 12th Web for All Conference (W4A '15). ACM, New York, NY, USA, Article 9, 4 pages. DOI: https://doi.org/10.1145/2745555.2746655. 4 pages
3A	**Leah Findlater**, **Lee Stearns**, **Ruofei Du**, **Uran Oh**, **David Ross**, **Rama Chellappa**, and **Jon Froehlich**. 2015. *Supporting Everyday Activities for Persons with Visual Impairments Through Computer Vision-Augmented Touch*. In Proceedings of the 17th International ACM SIGACCESS Conference on Computers & Accessibility (ASSETS '15). ACM, New York, NY, USA, 383-384. DOI: https://doi.org/10.1145/2700648.2811381. 2 pages
3B	**Hernisa Kacorri**, **Kris M. Kitani**, **Jeffrey P. Bigham**, and **Chieko Asakawa**. 2017. *People with Visual Impairment Training Personal Object Recognizers: Feasibility and Challenges*. In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (CHI '17). ACM, New York, NY, USA, 5839-5849. DOI: https://doi.org/10.1145/3025453.3025899. 12 pages
3C	**Brian A. Smith** and **Shree K. Nayar**. 2018. *The RAD: Making Racing Games Equivalently Accessible to People Who Are Blind*. In Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (CHI '18). Association for Computing Machinery, New York, NY, USA, Paper 516, 1–12. DOI: https://doi.org/10.1145/3173574.3174090 12 pages

Grading:

The following items will contribute to students' grades in this course:

Grade Category	Percentage	Letter	Range (%)
Assignments	60%	A	94–100
Labs	20%	A-	90–93
Participation	20%	B+	87–89
		B	83–86
Total	100%	B-	80–82
		C+	77–79
		C	73–76
		C-	70–72
		D+	67–69
		D	63–66
		D-	60–62

NOTE: Students will ultimately be assigned either a "pass" or a "fail" for the PCP program. However, letter grades will also be assigned to give students an idea of what they would receive in an actual college course. As a C- would not be a qualifying grade for maintaining good academic standing at Barnard, **students will be required to achieve a C in the course to pass the class**.

All final course grades will be rounded to the nearest whole number. **There will be no "bumping" or rounding up to the next grade bracket.**

This course will use the Canvas e-Learning course management system via Canvas to post grades and to communicate with class members. If you have a question about the course that other students could benefit from hearing the answer, please post to the appropriate discussion thread on Piazza rather than sending individual emails to the instructor.

Grade reviews must be requested within three days of a grade being posted. After this time, no grade will be revisited. In the event of a grade review, the entire assignment will be reviewed. Grade reviews must be requested in writing with an explanation describing why student believes the grade received is incorrect. Similarly, **inquiries about missing grades must be made within three days of grades being posted**.

Honesty & Collaboration:
High-level questions can be discussed amongst each other and amongst the groups. Plagiarism (misrepresenting others' ideas as your own, can be fixed with simple citation) is not allowed.

As for other courses at Barnard, offenders will be held to the Barnard Honor Code (see below) including reporting incidents to the Dean of Students. The results of this can include failing grades and disciplinary action (which can lead to expulsion).

Course Policies
Late Assignments:
All assignments will be assessed a late penalty of -10% for each day late. After 3 days, students will receive a 0. The only exception to this rule is if students contact the instructor **in writing before the assignment due date** to make arrangements for lateness. Excuses are not accepted. Notifications of mental or physical illness/injuries should be accompanied by a doctor's note and must include estimated duration.

Make-ups:
Students who contact the professor **before the due date** with appropriate requests for extension and/or makeup assignments will be given an additional amount of time to make up late assignments equal to the time lost due to the unforeseen circumstance.

Classroom Expectations:
To be courteous to your fellow students, please:
- Turn all cell phone ringers to silent and step outside if you must take calls.
- Turn off all audible notifications on laptops and phones.
- Refrain from texting during class.
- Use laptops only for taking notes, looking up relevant information, or interacting with the class.

Zoom Use
I recognize that learning remotely presents a series of challenges to fostering an accessible and inclusive educational experience. In order to address these difficulties, I am proposing the following practices. **Keep your microphone muted unless you are contributing to discussion in a small group or during a lecture.** Raise your hand using the "Raise Hand" feature if you want to speak or

ask a question. If you are having connectivity issues or if you have to log off before class ends, please review the lecture video when it is posted. If you are unable to stream the video, please contact me directly via email.

If you are comfortable discussing any circumstances that you anticipate affecting your education this semester, please feel free to set up an appointment with me during office hours. I will be recording all class sessions so that course content is accessible to all students but will pause the recording if sensitive topics are being discussed. Because I am recording the sessions and will be honoring students' requests to pause recordings, please refrain from recording them on your own. This is essential to building a community of trust and a culture of respect for one another's privacy.

As your professor, I will be maintaining as much flexibility as possible under the extraordinary circumstances in which this course is taking place. **In return I ask for your patience, understanding, and willingness to share feedback with me about the practices that you believe will best support an inclusive and accessible classroom.**

College Policies and Resources

Honor Code:

Barnard students are bound by The Honor Pledge, established 1912, updated 2016, which states, "We, the students of Barnard College, resolve to uphold the honor of the College… We pledge to do all that is in our power to create a spirit of honesty and honor for its own sake."

The Honor Code (https://barnard.edu/dos/honorcode) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor. Note that failure to comply with this commitment will result in disciplinary action compliant with the Barnard

Academic Accommodations for Students with Disabilities:

If you believe you may encounter barriers to the academic environment due to a documented disability or emerging health challenges, please feel free to contact me and/or the Center for Accessibility Resources & Disability Services (CARDS). Any student with approved academic accommodations is encouraged to contact me during office hours or via email. If you have questions regarding registering a disability or receiving accommodations for the semester, please contact CARDS at (212) 854-4634, cards@barnard.edu, or learn more at barnard.edu/disabilityservices. CARDS is located in 101 Altschul Hall.

Wellness

It is important for students to recognize and identify the different pressures, burdens, and stressors you may be facing, whether personal, emotional, physical, financial, mental, or academic. We as a community urge you to make yourself—your own health, sanity, and wellness—your priority throughout this term and your career here. Sleep, exercise, and eating well can all be a part of a healthy regimen to cope with stress. Resources exist to support you in several sectors of your life, and we encourage you to make use of them. Should you have any questions about navigating these resources, please visit these sites:

- http://barnard.edu/primarycare
- http://barnard.edu/counseling
- http://barnard.edu/wellwoman/about
- [Stressbusters Support Network](#)

Software Use

All faculty, staff, and students of Barnard College are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against Barnard's policies and rules, disciplinary action will be taken as appropriate. We, the members of the Barnard College community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.