

PSYCHOLOGY 490 (CAPSTONE) – DISABILITIES AND ASSISTIVE TECHNOLOGY

Fall 2018

Tu & Th, 1:15 – 2:30 PM

Oechsle Hall 211

INSTRUCTOR: Michael Nees
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OFFICE: Oechsle Hall 305
OFFICE HOURS: Tu 2:45-4:00 PM; Th 2:45-4:00 PM;
and by appointment

DESCRIPTION

PSYC 490 (Capstone): Disabilities and Assistive Technology is a seminar that examines the historical, theoretical, applied, and ethical aspects of uses of technology to assist people with disabilities. Students evaluate historical perspectives on disability as well as contemporary models of disability. The psychological and social experiences of people with disabilities are explored. The nature of technology is considered, especially as it applies to augmenting the capabilities of people with disabilities. A variety of perspectives on inclusive design are reviewed, and assistive technologies for several domains of functional impairment are covered in detail. Throughout the course, synthesis of the seminar topic with the broader curriculum of psychology will be emphasized.

OUTCOMES

Students who successfully complete this course will be able to:

- demonstrate understanding of the vocabulary of disabilities and assistive technology.
- read, reflect upon, and discuss a variety of primary and secondary sources in the disabilities and assistive technology literature.
- identify and discuss the strengths, limitations, and historical context of different models of disability.
- write a paper, make a brief presentation, and present a poster about an assistive technology.
- identify and discuss representative assistive technology for a variety of domains of functional impairment.
- critically evaluate assistive technology with respect to ethical issues.
- write a long paper that is representative of a theoretical review in the discipline of psychology.

TEXT AND MATERIALS

All readings and materials will be posted to the course website.

PREREQUISITES

To enroll in this course, students must be psychology majors with senior status or have the permission of the instructor.

COURSE WEBSITE

Materials related to this course will be posted on Moodle. You should check the course website regularly for supplemental materials. The topic schedule and reading schedule will be periodically updated as needed and posted to Moodle.

“Moodle contains student information that is protected by the Family Educational Right to Privacy Act (FERPA). Disclosure to unauthorized parties violates federal privacy laws. Courses using Moodle will make student information visible to other students in this class. Please remember that this information is protected by these federal privacy laws and must not be shared with anyone outside the class. Questions can be referred to the Registrar's Office.”

--Lafayette College Moodle Privacy Statement

WHAT TO EXPECT IN CLASS

This is a discussion-based seminar. For each meeting of the class, students are expected to have completed the assigned readings (typically around 50 or more pages of articles) or materials (films, etc.) and be prepared to participate in a robust in-class discussion.

OFFICE HOURS and CONTACTING ME

My office hours for the Fall 2018 semester will be from 2:45 to 4:00 PM on Tuesdays and Thursdays. **You can visit me during office hours for any reason without an appointment.** In the unusual event that I need to cancel office hours, I will make an announcement in class and/or post an announcement to Moodle. **I am also available by appointment and will be glad to work with you to arrange alternative meeting times.** If I am not in my office, email is the best way to reach me.

GRADES

Your final grade in this course will be determined by your performance on a variety of assignments.

Participation	= 150 points
Homework & in-class work	= 150 points
Paper 1 & poster	= 250 points
In-class presentation	= 100 points
Final Paper	= 350 points
	1000 total points

Final grades will be determined as follows:

A	= 930 or more points
A-	= 900 - 929 points
B+	= 870 - 899 points
B	= 830 - 869 points
B-	= 800 - 829 points
C+	= 770 - 799 points
C	= 730 - 769 points
C-	= 700 - 729 points
D+	= 670 - 699 points
D	= 630 - 669 points
D-	= 600 - 629 points
F	= <600 points

Grades are determined by point totals, and I do not round up based on percentages. You will only receive credit for the points that you earn. It is your responsibility to track your own grade in this course. I am glad to discuss your progress with you at any time, but please take the initiative to track your own grade and do not ask me to calculate your grade for you during the semester.

IMPORTANT NOTE ABOUT GRADES

I will not invent new assignments to give points that you did not earn. Please see me as soon as possible if you are concerned about your grade; we can work together to try to address any problems that arise related to grades.

ATTENDANCE POLICY

If you do not attend class, you will almost certainly fail this course. Class attendance is a fundamental component of your educational experience, and by attending and participating in class you can also help your classmates and the instructor learn from the unique perspective that you bring. Attendance will be taken on most days throughout the semester. **I will deduct 10 points from your final point total for each unexcused absence you accumulate. I will deduct 5 points from your final point total each time you are late to class for an unexcused reason.** If you accumulate more than 2 unexcused absences before the midterm or 4 total unexcused absences at any time during the course, I may refer you to a consultation with the Dean with the recommendation that you be withdrawn from the course. Excused absences include all absences approved by Lafayette College and absences for documented illnesses or medical emergencies. Other absences may be excused subject to my discretion. In most circumstances, I will gladly excuse absences for contagious illnesses and other legitimate circumstances that prevent class attendance, but you must contact me regarding any absence that you wish to count as excused. You should contact me at least one week in advance for any planned, excused absence or within 24 hours after any unplanned absence (e.g., an emergency or illness).

In summary, if you miss a class, you should take the following steps *in this order*:

1. Contact me **via email** as soon as possible if you intend for your absence to be excused.
2. Read all assigned material from the textbook and/or the supplemental materials on Moodle for the day that you missed.
3. Consult with one or more of your classmates and get notes for the content that you missed.
4. See me during office hours to clarify any remaining questions, if needed.

If you miss an assignment with an unexcused absence, you will receive no credit for the assignment. If your absence is not approved by the College's excused absence policies, I retain sole discretion to decide if the absence will be counted as excused or unexcused.

PARTICIPATION

The quality of students' participation will have a major impact on the quality of this seminar. Most class sessions will involve a discussion of the assigned readings. Homework questions about the readings will be assigned to facilitate discussions, so quality participation will require that readings and homework assignments are completed on time. Attendance alone will not earn full credit for participation. In general, I expect that students will actively participate with multiple comments and/or questions during each class. A lively 75-minute discussion will require that most students will participate (with a comment, question, etc.) five or more times during most classes. Although I do not intend to track every comment made in every class, the small enrollment for the class will make it noticeable if a student does not fully participate. If you do not participate actively in class, you will be at risk of losing points for the participation portion of the grade. Students who disrupt class (including by texting during class) will lose participation points. In general, if you do not accumulate unexcused absences, come to class prepared, participate often, and do not disrupt class, you can expect to receive an A for your participation grade. You may ask me for feedback on your participation at any time during the semester.

HOMEWORK and IN-CLASS WORK

Homework and in-class work may include student responses to questions about assigned readings, and individual or group work related to course content. Detailed information and due dates will be provided for homework assignments as the course progresses. Homework typically is due at the beginning of class. Late homework assignments will be penalized one letter grade per day (24 hours).

FIRST PAPER AND POSTER

In the first half of the semester, you will complete a paper for which you will examine the empirical literature on an assistive technology of your choice. You will complete **a written, APA style report**. You will also make a

poster and **present your poster in a session outside of class** that may be attended by other psychology students and faculty. Detailed information will be provided later in the course.

PRESENTATION AND SECOND PAPER

You will complete a theoretical review paper that is representative of the type of synthesis and analysis published in psychological journals (e.g., *Psychological Bulletin*). You will complete a **written, APA style report**. In the report you will: (1) identify and focus on a theoretical or practical problem regarding disabilities and assistive technology; (2) review and analyze the empirical literature related to your problem; and (3) synthesize the literature to produce a novel contribution to our understanding of the problem. During the planning stages of your project, you will also give an **in-class presentation** that will allow you the opportunity to receive feedback from other students and the instructor about your topic. Detailed information will be provided later in the course.

STUDENTS WITH DISABILITIES

“In compliance with Lafayette College policy and equal access laws, I am available to discuss appropriate academic accommodations that you may require as a student with a disability. Requests for academic accommodations need to be made during the first two weeks of the semester, except for unusual circumstances, so arrangements can be made. Students must register with the Office of the Dean of the College for disability verification and for determination of reasonable academic accommodations.”

--Lafayette College Disability Statement

I am glad to work with you and the Disability Services office to ensure access to course materials and, where needed, to provide specialized arrangements for assignments. Students who seek accommodations must file appropriate documentation with Disability Services. You should also contact me in person or via email by the end of the second week of classes so that we can coordinate with Disability Services to plan alternate arrangements for course materials and testing as needed. **You must notify both me and ATTIC via email at least three days in advance for any test or assignment for which you require accommodations so that we can work together to meet your needs.** If you do not contact me in advance, you must complete the assignment without alternate accommodations.

ACADEMIC INTEGRITY

“To maintain the scholarly standards of the College and, equally important, the personal ethical standards of our students, it is essential that written assignments be a student’s own work, just as is expected in examinations and class participation. A student who commits academic dishonesty is subject to a range of penalties, including suspension or expulsion. Finally, the underlying principle is one of intellectual honesty. If a person is to have self-respect and the respect of others, all work must be his/her own.”

--From the Lafayette College Student Handbook Code of Conduct

I assume that you have read the Lafayette College Code of Conduct and the Department of Psychology Academic Honesty Statement and Policy, and by enrolling in this class you are bound to abide by these codes and policies and the further conditions established in this syllabus. I will take violations of academic integrity seriously and will refer any such violations to the Dean of the College for investigation and further action. In this class you may not share outside assignments except where explicitly noted by the instructor, and all work is to be completed individually. Do not plagiarize on written assignments. Plagiarism includes improperly using words and/or ideas that are not your original work.

RESPECT, COURTESY, and COMMON SENSE

Respectful debate can contribute to the learning experience and is encouraged. Students should, however, always treat each other and the instructor with respect. Please turn off all cell phones, music players, and audible alarms on laptops. **Please do not send or check text messages during class.** If I see you using your cell phone during class, I may ask you to leave class. Please be on time for class. If you are late for class, you will not be allowed to sign the attendance sheet. If you must be late to class or need to leave class early, please sit by the door so as not to disturb the rest of the class. You will be asked to leave if you disrupt the learning environment. I consider texting and using laptops or phones for any purpose other than taking notes about class to be a disruption to the learning environment.

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EXAMINATION OF SENSITIVE, CONTROVERSIAL, OR POTENTIALLY OFFENSIVE TOPICS

This course may/will examine topics that are sensitive, controversial, or offensive to some (or even most) people. Such topics are difficult to avoid in the course of an education in psychology—the scientific study of human behavior. Further, I believe that the free and critical examination of different perspectives—even, and perhaps especially, those that are controversial or offensive—is a critical aspect of your academic training and preparation for your future roles in life. In this course, we may/will approach sensitive, controversial, and potentially offensive topics directly rather than avoiding them. I generally do not announce “trigger warnings,” but I do my best to approach sensitive, controversial, or potentially offensive course content with due care and respect for all people. For pedagogical purposes, I may/will present (and perhaps even defend) perspectives in class discussion that do not reflect my own personal beliefs. To the extent possible, our discussion of these topics will be driven by empirical evidence from the scientific literature, and the validity of different perspectives will be evaluated on their scientific merit. I encourage you to express your own perspectives on sensitive, controversial, or offensive topics in class in the interest of contributing to open and respectful dialogue on these topics. You also are always welcome to consult with me personally to discuss your thoughts on any course material that is sensitive, controversial, or offensive to you.

RETENTION OF MATERIALS BY STUDENTS

Students are responsible for retaining any graded materials returned by the instructor. In the event that you wish to appeal or review your course grade, you will be responsible for producing all class assignments that have been returned to you.

NOTE ON CREDIT HOURS

“The student work in this course is in full compliance with the federal definition of a four [*two or one as appropriate for half and quarter unit courses*] credit hour course. Please see the Registrar’s Office web site (<http://registrar.lafayette.edu/additional-resources/cep-course-proposal/>) for the full policy and practice statement.”

--Lafayette College Statement Regarding the Credit Hour Provisions in the Higher Education Opportunity Act of 2008

PSYCHOLOGY 490 – DISABILITIES AND ASSISTIVE TECHNOLOGY

FALL 2018 – WORKING SCHEDULE

Topics, readings, and assignment due dates may change.

Class date	Topics	Readings	Notes
Aug 28 (Tu)	Welcome & introduction	Syllabus	
Aug 30 (Th)	Historical perspectives on disability	Braddock & Parish (2001)	
Sept 4 (Tu)	Models of disability	Smart & Smart (2006) Anastasiou & Kauffman (2013)	
Sept 6 (Th)	Taxonomy of impairments Classification of disabilities	Courtney-Long et al. (2013) Altman (2001)	
Sept 11 (Tu)	Plan poster and paper 1 Experiences of disability	Gill (2001)	Distribute paper 1 reqs
Sept 13 (Th)	<i>Murderball</i> discussion		
Sept 18 (Tu)	Experience of disability part 2	Excerpts from Mahoney (2014)	
Sept 20 (Th)	Experience of disability part 3: Visible & invisible disabilities	Santuzzi et al. (2014) Saal et al. (2014) Mullins & Preyde (2013)	
Sept 25 (Tu)	What is technology? What is assistive technology? Assistive technology history	Kline (1985) Bryant & Bryant Ch 1 Desmond et al. (2018)	
Sept 27 (Th)	Designing for diversity AT selection and sustainability	Ashok & Jacko (2009) MacLachlan & Scherer (2018) Scherer & Federici (2015)	Poster due Friday 9/28
Oct 2 (Tu)	Poster session 12-1p Oct 2 Poster topics discussion and catch- up		Poster session 12-1p Oct 2
Oct 4 (Th)	Prof. Nees at HFES Conference <i>Lives Worth Living</i> in-class viewing		Paper 1 due Oct 5 5pm
Oct 9 (Tu)	FALL BREAK – NO CLASS		
Oct 11 (Th)	Presentation & final paper planning; Begin inclusive design	Cooper (2003) King-Sears (2009) Edyburn (2010)	Distribute final paper reqs
Oct 16 (Tu)	Inclusive design philosophies	Iwarsson (2003) Spinuzzi (2004)	
Oct 18 (Th)	Language (ASL, braille, etc.)	How Braille works (link) ASL fact sheet Lane & Bahan (1998) <i>Sound and Fury</i>	
Oct 23 (Tu)	AT for activities of daily living (ADL); Sex	DiGiulio (2003) Bryant & Bryant Ch 8	
Oct 25 (Th)	AT for communication	Lule et al (2009) Bruce (2002)	Final paper topic approval due
Oct 30 (Tu)	AT for education Testing accommodations	Phillips (1994) (pp 93-104) Nees & Berry (2013)	
Nov 1 (Th)	Mainstream versus specialized education; Institutionalization versus community-based services	Kozma et al (2009) Cooney et al (2006) Foster (1989)	
Nov 6 (Tu)	Catch-up		
Nov 8 (Th)	Presentations		
Nov 13 (Tu)	Presentations		
Nov 15 (Th)	Presentations		
Nov 20 (Tu)	AT for play and leisure	Modell & Valdez (2002) Montelione & Mastro (1985) Roden et al (2007) Walker et al. (2008)	
Nov 22 (Th)	THANKSGIVING – NO CLASS		
Nov 27 (Tu)	Experiences of families of people with disabilities	Rivard et al Sen Yurtsever (2007) Margalit (1992)	Final paper draft 1 due

Nov 29 (Th)	Ethics of AT – Oscar Pistorious, Performance Enhancement, Cyborgs, etc.	Burkett et al. (2011) Schwartz & Watermeyer (2008) Camporesi (2008)	
Dec 4 (Tu)	Workshop final papers		Peer review due Instructor feedback returned
Dec 6 (Th)	Wrap up		Final paper due Dec 12 @ 5 pm

Readings:

- Altman, B.M. (2001). Disability definitions, models, classification schemes, and applications. In Albrecht Gary, Seelman, Catherine & Bury, Michael (Eds.). *Handbook of Disability Studies*. Thousand Oaks, CA: Sage Publications. (pp. 97-121).
- Anastasiou, D., & Kauffman, J. M. (2013, August). The social model of disability: Dichotomy between impairment and disability. In *The Journal of Medicine and Philosophy: A Forum for Bioethics and Philosophy of Medicine*, 38(4), 441-459.
- Ashok, M. & Jacko, J. (2009). Dimensions of user diversity. In C. Stephanidis (ed.). *The Universal Access Handbook*. New York: CRC Press. (pp. 4.1-4.15).
- Borodin, Y., Bigham, J. P., Dausch, G., & Ramakrishnan, I. V. (2010, April). More than meets the eye: A survey of screen-reader browsing strategies. In *Proceedings of the 2010 International Cross Disciplinary Conference on Web Accessibility (W4A)* (pp. 1-10).
- Braddock, D., & Parish, S. (2001). An institutional history of disability. In Albrecht Gary, Seelman, Catherine & Bury, Michael (Eds.). (pp. 11-68). Thousand Oaks, CA: Sage Publications.
- Bruce, S. (2002). Impact of a communication intervention model on teachers' practice with children who are congenitally deaf-blind. *Journal of Visual Impairment & Blindness (JVIB)*, 96(03).
- Bryant, D. P., & Bryant, B. R. (2011). *Assistive Technology for People with Disabilities*. Pearson Higher Ed.
- Burkett, B., McNamee, M., & Potthast, W. (2011). Shifting boundaries in sports technology and disability: equal rights or unfair advantage in the case of Oscar Pistorius?. *Disability & Society*, 26(5), 643-654.
- Camporesi, S. (2008). Oscar Pistorius, enhancement and post-humans. *Journal of Medical Ethics*, 34(9), 639-639.
- Cooney, G., Jahoda, A., Gumley, A., & Knott, F. (2006). Young people with intellectual disabilities attending mainstream and segregated schooling: perceived stigma, social comparison and future aspirations. *Journal of Intellectual Disability Research*, 50(6), 432-444.
- Cooper, H. (2003). Psychological Bulletin: Editorial. *Psychological Bulletin*, 129(1), 3-9.
- Courtney-Long, E. A., Carroll, D. D., Zhang, Q. C., Stevens, A. C., Griffin-Blake, S., Armour, B. S., & Campbell, V. A. (2015). Prevalence of disability and disability type among adults—United States, 2013. *Morbidity and Mortality Weekly Report*, 64(29), 777-783.
- Desmond, D., Layton, N., Bentley, J., Boot, F. H., Borg, J., Dhungana, B. M., ... & Mavrou, K. (2018). Assistive technology and people: a position paper from the first global research, innovation and education on assistive technology (GREAT) summit. *Disability and Rehabilitation: Assistive Technology*, 1-8.
- Di Giulio, G. (2003). Sexuality and People Living with Physical or Developmental Disabilities: A Review of Key Issues. *Canadian Journal of Human Sexuality*, 12(1).
- Foster, S. (1989). Reflections of a group of deaf adults on their experiences in mainstream and residential school programs in the United States. *Disability, Handicap & Society*, 4(1), 37-56.
- Edyburn, D. L. (2010). Would you recognize universal design for learning if you saw it? Ten propositions for new directions for the second decade of UDL. *Learning Disability Quarterly*, 33(1), 33-41.
- Gill, C.J. (2001). Divided understandings: The social experience of disability. In Albrecht Gary, Seelman, Catherine & Bury, Michael (Eds.). *Handbook of Disability Studies*. Thousand Oaks, CA: Sage Publications. (pp. 351-372).
- Iwarrson, S., & Stahl, A. (2003). Accessibility, usability, and universal design—positioning and definition of concepts describing person-environment relationships. *Disability and Rehabilitation*, 25(2), 57-66.
- King-Sears, M. (2009). Universal design for learning: Technology and pedagogy. *Learning Disability Quarterly*, 32(4), 199-201.
- Kline, S. J. (1985). What is technology?. *Bulletin of Science, Technology & Society*, 5(3), 215-218.
- Kozma, A., Mansell, J., & Beadle-Brown, J. (2009). Outcomes in different residential settings for people with intellectual disability: a systematic review. *American journal on intellectual and developmental disabilities*, 114(3), 193-222.
- Lane, H., & Bahan, B. (1998). Article Commentary: Ethics of cochlear implantation in young children: A review and reply from a Deaf-World perspective. *Otolaryngology—Head and Neck Surgery*, 119(4), 297-313.
- Lulé, D., Zickler, C., Häcker, S., Bruno, M. A., Demertzi, A., Pellas, F., ... & Kübler, A. (2009). Life can be worth living in locked-in syndrome. *Progress in Brain Research*, 177, 339-351.
- MacLachlan, M., & Scherer, M. (2018). Systems thinking for assistive technology: a commentary on the GREAT summit. *Disability and Rehabilitation: Assistive Technology*, 1-5.
- Mahoney, R. (2014). *For the Benefit of Those who See: Dispatches from the World of the Blind*. New York: Little, Brown.
- Margalit, M., Raviv, A., & Ankonina, D. B. (1992). Coping and coherence among parents with disabled children. *Journal of Clinical Child and Adolescent Psychology*, 21(3), 202-209.
- Modell, S. J., & Valdez, L. A. (2002). Beyond bowling: Transition planning for students with disabilities. *Teaching Exceptional Children*, 34(6), 46-52.
- Montelione, T., & Mastro, J. V. (1985). Beep baseball. *Journal of Physical Education, Recreation & Dance*, 56(6), 60-65.
- Mullins, L., & Preyde, M. (2013). The lived experience of students with an invisible disability at a Canadian university. *Disability & Society*, 28(2), 147-160.

- Nees, M. A., & Berry, L. F. (2013). Audio assistive technology and accommodations for students with visual impairments: Potentials and problems for delivering curricula and educational assessments. *Performance Enhancement & Health*, 2(3), 101-109.
- Phillips, S. E. (1994). High-stakes testing accommodations: Validity versus disabled rights. *Applied Measurement in Education*, 7(2), 93-120.
- Rivard, M., Terroux, A., Parent-Boursier, C., & Mercier, C. (2014). Determinants of stress in parents of children with autism spectrum disorders. *Journal of autism and developmental disorders*, 44(7), 1609-1620.
- Roden, T. E., Parberry, I., & Ducrest, D. (2007). Toward mobile entertainment: A paradigm for narrative-based audio only games. *Science of Computer Programming*, 67(1), 76-90.
- Saal, K., Martinez, L. R., & Smith, N. A. (2014). Visible disabilities: Acknowledging the utility of acknowledgment. *Industrial and Organizational Psychology*, 7(2), 242-248.
- Santuzzi, A. M., Waltz, P. R., Finkelstein, L. M., & Rupp, D. E. (2014). Invisible disabilities: Unique challenges for employees and organizations. *Industrial and Organizational Psychology*, 7(2), 204-219.
- Scherer, M. J., & Federici, S. (2015). Why people use and don't use technologies: Introduction to the special issue on assistive technologies for cognition/cognitive support technologies. *NeuroRehabilitation*, 37(3), 315-319.
- Sen, E., & Yurtsever, S. (2007). Difficulties experienced by families with disabled children. *Journal for Specialists in Pediatric Nursing*, 12(4), 238-252.
- Swartz, L., & Watermeyer, B. (2008). Cyborg anxiety: Oscar Pistorius and the boundaries of what it means to be human. *Disability & Society*, 23(2), 187-190.
- Smart, J. F., & Smart, D. W. (2006). Models of disability: Implications for the counseling profession. *Journal of Counseling & Development*, 84(1), 29-40.
- Spinuzzi, C. (2005). The methodology of participatory design. *Technical Communication*, 52(2), 163-174.
- Walker, B. N., Kim, J., & Pendse, A. (2007, August). Musical soundscapes for an Accessible Aquarium: Bringing Dynamic Exhibits to the Visually Impaired. In *ICMC*.