Neuroscience & Society PSYC UN3496

<u>Course Information</u> Fall 2020 Location: Zoom (see below) Wednesdays 6:10-8pm Zoom Link: See Courseworks Instructor Information Jenna Reinen, Ph.D. jr2340@columbia.edu Office hours: by appointment

Course Bulletin Description: This course investigates the ways in which research in human neuroscience both reflects and informs societal issues. Topics may include how neuroscience research is interpreted and applied in areas such as healthcare, education, law, consumer behavior, and public policy.

Prerequisites: Science of Psychology (PSYC UN1001) or Mind, Brain, & Behavior (PSYC UN1010), or equivalent introductory psychology course. Students who have not taken one of these courses may also be admitted with instructor permission.

Full Description: This seminar course considers the role of social and cognitive neuroscience in society, specifically, how our understanding of the brain can be applied – and potentially misapplied – in areas such as social and economic policy, healthcare, education, and law. The course is grounded in recent findings in neuroscience, but, in addition to evaluating these findings on their own merits, we will also discuss their potential societal implications. Questions we will explore include: How does our understanding of adolescent brain development affect culpability in the juvenile justice system? How does neuroscience inform our understanding of cultural differences? How can we use neuroscience to offer better treatment to those suffering from mental illness or chronic pain? Can we use findings from neuroscience in the classroom, in the marketplace, or on the campaign trail? What are the ethical implications of neuroenhancement and neurotherapeutics?

Role of PSYC UN3496 in the Psychology Curriculum: PSYC UN3496 is a seminar designed especially for undergraduates majoring in Psychology or Neuroscience & Behavior and for students participating in the Psychology Post-Baccalaureate Certificate Program. It will fulfill the following degree requirements:

 For the Psychology major or concentration in the College and in the School of General Studies and for the Psychology Post-Baccalaureate Certificate Program, this class will meet the Group II (Psychobiology & Neuroscience) distribution requirement.

- For the Neuroscience and Behavior joint major, it will fulfill the fifth Psychology requirement for "one advanced psychology seminar from a list approved by the Psychology Department advisor to the program."
- For the Psychology Post-Baccalaureate students and for Psychology majors who entered Columbia in Fall 2013 or later, it will fulfill the seminar requirement.

Readings: There is no textbook required for this course. Readings will comprise empirical articles, literature reviews, and commentaries in the fields of social and cognitive neuroscience. The readings listed in the Schedule below are provisional but illustrative of the types of articles we will be reading and discussing. All readings will be posted in PDF form on CourseWorks.

Schedule: Please refer to the Modules section on CourseWorks to find the topics, readings, and assignments for each week.

The majority of class time will be devoted to student presentations and student-led discussions (detailed in *Course Requirements*). The schedule of topics is somewhat flexible and can be altered to reflect the interests of the class, therefore, note that <u>the</u> <u>assignments and dates below are subject to change</u> based on student presentations and you should check back frequently.

September 9th: Introduction

Introduction and Neuron chapters of Brain Facts: A Primer on the Brain and Nervous System, (2012) *Society for Neuroscience*, 4-13.

Bassett, D. S., & Gazzaniga, M. S. (2011). Understanding complexity in the human brain. *Trends in Cognitive Sciences*, *15*(5), 200-209.

Farah, M. J. (2014). Brain images, babies, and bathwater: critiquing critiques of functional neuroimaging. *Hastings Center Report*, *44*(s2), S19-S30.

Poldrack, R. A., & Farah, M. J. (2015). Progress and challenges in probing the human brain. *Nature*, 526(7573), 371-379.

Rosen, B. R., & Savoy, R. L. (2012). fMRI at 20: Has it changed the world?. *Neuroimage*, 62(2), 1316-1324.

September 16, 2020: Discuss introductory papers and finalize schedule

September 23, 2020: Neuroscience & Memory & Decision-making

Readings:

Greene, J., Paxton, J. & Raichle, M.E. (2009) Patterns of neural activity associated with honest and dishonest moral decisions. *PNAS*, *106*(30), 12506-12511.

Keim, Brandon. "Brain Scanners Can See Your Decisions Before You Make Them." *Wired*, April 13, 2008.

Langleben, D. D., & Moriarty, J. C. (2013). Using brain imaging for lie detection: Where science, law, and policy collide. *Psychology, Public Policy, and Law, 19*(2), 222.

Rissman, J., Greely, H. T., & Wagner, A. D. (2010). Detecting individual memories through the neural decoding of memory states and past experience. *PNAS*, *107*(21), 9849-9854

Schachter, D.L. & Loftus, E.F. (2013). Memory and law: What can cognitive neuroscience contribute? *Nature Neuroscience*, *16*, 119-123.

September 30, 2020: Neuroscience & Free Will: Morality and Ethics

*Class discussion: Address questions about proposals

Readings:

Eres R., Decety, J., Louis, W.R., & Molenberghs, P. (2015). Individual differences in local gray matter density are associated with differences in affective and cognitive empathy. *Neuroimage*, *117*, 305-310.

<u>Greene, J. (2003). From neural 'is' to moral 'ought': what are the moral implications of neuroscientific moral psychology?. *Nature Reviews Neuroscience*, *4*(10), 846-850.</u>

Klimecki, O. M., Leiberg, S., Ricard, M., & Singer, T. (2014). Differential pattern of functional brain plasticity after compassion and empathy training. *Social Cognitive and Affective Neuroscience*, 9(6), 873-879.

Roskies, A. L. (2012). How does the neuroscience of decision making bear on our understanding of moral responsibility and free will? *Current Opinion in Neurobiology*, 22(6), 1022-1026.

Weisz, E., & Zaki, J. (2018). Motivated empathy: a social neuroscience perspective. *Current Opinion in Psychology*, 24, 67-71.

October 7, 2020: Neuroscience & Free Will:Culpability in the Courtroom

PROPOSALS DUE

Readings:

Buckholz, J.W., Treadway M.T., Cowan R.L., Woodward N.D., Benning, S.D., Li, R., Ansari M.S., Baldwin, R.M., Schwartzman A.N., Shelby, E.S., Smith, C.E., Cole, D., Kessler, R.M., & Zald, D. H. Mesolimbic dopamine reward system hypersensitivity in individuals with psychopathic traits (2010). *Nature Neuroscience*, *13*(4), 419-421.

Decety, J., Skelly, L. R., & Kiehl, K. A. (2013). Brain response to empathy-eliciting scenarios involving pain in incarcerated individuals with psychopathy. *JAMA Psychiatry*, 70(6), 638-645.

<u>Glenn, A.L, Raine, A. (2014). Neurocriminology: implications for punishment, prediction,</u> and prevention of criminal behavior. *Nature Reviews Neuroscience*, *15*, 54-63.

Moretto, G., Làdavas, E., Mattioli, F., & Di Pellegrino, G. (2010). A psychophysiological investigation of moral judgment after ventromedial prefrontal damage. *Journal of Cognitive Neuroscience*, 22(8), 1888-1899.

Yong, E. How Psychopaths See The World. The Atlantic, March 12, 2018.

Recommended but optional:

Heaney, K. My Life As a Psychopath. The Cut, August 10, 2018.

Poldrack, R.A., Monahan, J., Imrey, P.B., Reyna, V., Raichle, M.E., Faigman, D., & Buckholtz, J.W. (2018). Predicting Violent Behavior: What Can Neuroscience Add? 22(2), 111-123.

October 14th, 2020: Neuroscience & Free Will: Adolescent Brain Development

Bonnie, R. J., & Scott, E. S. (2013). The teenage brain: Adolescent brain research and the law. *Current Directions in Psychological Science*, 22(2), 158-161.

Casey, B. J. (2015). Beyond simple models of self-control to circuit-based accounts of adolescent behavior. *Annual Review of Psychology*, *66*, 295-319.

Galván, A. (2014). Insights about adolescent behavior, plasticity, and policy from neuroscience research. *Neuron*, *83*(2), 262-265.

Somerville, L., H., Hare, T., & Casey, B. J. (2011). Frontostriatal Maturation Predicts Cognitive Control Failure to Appetitive Cues in Adolescents. *Journal of Cognitive Neuroscience*, 23(9), 2123-2134.

Steinberg, L. (2013). The influence of neuroscience on US Supreme Court decisions about adolescents' criminal culpability. *Nature Review Neuroscience*, *14*: 513-518.

Recommended but optional:

Chick, C. F. (2015). Reward processing in the adolescent brain: Individual differences and relation to risk taking. *The Journal of Neuroscience*, *35*(40), 13539-13541.

Galvan, A., Hare, T.A., Parra, C.E., Penn, J., Voss, H., Glover, G., & Casey, B.J. (2006). Earlier Development of the Accumbens Relative to Orbitofrontal Cortex Might Underlie Risk-Taking Behavior in Adolescents. *The Journal of Neuroscience*, 26(25):6885–6892.

October 21, 2020: MIDTERM PAPER DUE

Neuroscience & Brain Development: Poverty and Privilege

Hackman, D. A., Gallop, R., Evans, G. W., & Farah, M. J. (2015). Socioeconomic status and executive function: Developmental trajectories and mediation. *Developmental* <u>Science, 18(5), 371-379.</u>

Hair, N. L., Hanson, J. L., Wolfe, B. L., & Pollak, S. D. (2015). Association of child poverty, brain development, and academic achievement. *JAMA Pediatrics*, *169*(9), 822-829.

Johnson, S. B., Riis, J. L, Noble, K. G. (2016). State of the Art Review: Poverty and the Developing Brain. *Pediatrics*, *137*(4), e20153075.

Luby, J., Belden, A., Botteron, K., Marrus, N., Harms, M. P., Babb, C., ... & Barch, D. (2013). The effects of poverty on childhood brain development: The mediating effect of caregiving and stressful life events. *JAMA Pediatrics*, *167*(12), 1135-1142.

Recommended but optional:

Farah, M. J., Noble, K. G., & Hurt, H. (2005). Poverty, privilege, and brain development: empirical findings and ethical implications. *Neuroethics in the 21st Century*, 1-27.

October 28, 2020: Neuroscience & Education: Neuroeducation

Ansari, D., De Smedt, B., & Grabner, R. H. (2012). Neuroeducation-a critical overview of an emerging field. *Neuroethics*, *5*(2), 105-117.

Hardiman, M., Rinne, L., Gregory, E., & Yarmolinskaya, J. (2012). Neuroethics, neuroeducation, and classroom teaching: Where the brain sciences meet pedagogy. *Neuroethics*, *5*(2), 135-143.

Liston, C., McEwen B.S., Casey, B.J. (2009). Psychosocial stress reversibly disrupts prefrontal processing and attentional control. *PNAS*, *106*(3), 912-917.

Romeo, R.R., Leonard, J.A., Robinson, S. T., West, M.R., Mackey, A.P., Rowe, M.L., & Gabrieli, J.D.E. (2018). Beyond the 30-Million-Word Gap: Children's Conversational Exposure Is Associated With Language-Related Brain Function. *Psychological Science*, 29(5) 700–710.

Sigman, M., Peña, M., Goldin, A.P., and Ribeiro, S. (2014). Neuroscience and education: prime time to build the bridge. *Nature Neuroscience*, *17*(4), 497-502.

Recommended but optional:

Hoeft et al. (2011). Neural systems predicting long-term outcome in dyslexia. *PNAS*, 108(1), 361-366.

Hook, C. J., & Farah, M. J. (2013). Neuroscience for educators: What are they seeking, and what are they finding?. *Neuroethics*, 6(2), 331-341.

November 4, 2020: Neuroscience & Health: Psychiatry & the Brain

Casey, B. J., Craddock, N., Cuthbert, B. N., Hyman, S. E., Lee, F. S., & Ressler, K. J. (2013). DSM-5 and RDoC: Progress in psychiatry research?. *Nature Reviews Neuroscience*, *14*(11), 810-814.

Deisseroth, K. (2012). Optogenetics and psychiatry: Applications, challenges, and opportunities. *Biological Psychiatry*, *71*(12), 1030-1032.

Holmes, A., and Patrick, L. (2018). The Myth of Optimality in Clinical Neuroscience. *Trends in Cognitive Sciences*, 22(3), 241-257.

Kandel, E. "The New Science of Mind." The New York Times. Sept 6, 2013.

McGrath, C. L., Kelley, M. E., Dunlop, B. W., Holtzheimer III, P. E., Craighead, W. E., & Mayberg, H. S. (2014). Pretreatment brain states identify likely nonresponse to standard treatments for depression. *Biological Psychiatry*, 76(7), 527-535.

Recommended but optional:

Cacioppo, J. T., Cacioppo, S., Dulawa, S., & Palmer, A. A. (2014). Social neuroscience and its potential contribution to psychiatry. *World Psychiatry*, *13*(2), 131-139.

Kapur, S., Phillips, A. G., & Insel, T. R. (2012). Why has it taken so long for biological psychiatry to develop clinical tests and what to do about it? *Molecular Psychiatry*, *17*(12), 1174-1179.

November 11, 2020 Neuroscience, AI, & Health: Neuroenhancement

Corbyn, Zoe. "Are brain implants the future of thinking?" *The Guardian*, September 22, 2019.

Holtzheimer, P.E., Husain, M.M., Lisanby, S.H., Taylor, S.F., Whitworth, L.A., et al. (2017). Subcallosal cingulate deep brain stimulation for treatment-resistant depression: a multisite, randomised, sham-controlled trial. *The Lancet Psychiatry*, 4(11), 839-849.

Kadosh, R. C., Levy, N., O'Shea, J., Shea, N., & Savulescu, J. (2012). The neuroethics of non-invasive brain stimulation. *Current Biology*, 22(4), R108-R111.

Mankin, E. A., & Fried, I. (2020). Modulation of Human Memory by Deep Brain Stimulationof the Entorhinal-Hippocampal Circuitry. *Neuron*, 106 (2), 218-235.

Tracey, I., & Flower, R. (2014). The warrior in the machine: Neuroscience goes to war. *Nature Reviews Neuroscience*, *15*, 825-834.

Wexler, A., & Reiner, P.B. (2019). Oversight of direct-to-consumer neurotechnologies. Science, 363(6424), 234-235.

Recommended but optional:

Hassabis, D., Kumaran, D., Summerfield, C., & Botvinick, M. (2017). Neuroscience-Inspired Artificial Intelligence. *Neuron*, *95*, 245-258.

Rabins, P., Appleby, B. S., Brandt, J., DeLong, M. R., Dunn, L. B., Gabriëls, L., ... & Mathews, D. J. (2009). Scientific and ethical issues related to deep brain stimulation for disorders of mood, behavior, and thought. *Archives of General Psychiatry*, 66(9), 931-937.

Talbot M. (2009). Brain gain. The New Yorker, April 27, 2009, 32-43.

Vedder, A., & Klaming, L. (2010). Human enhancement for the common good—Using neurotechnologies to improve eyewitness memory. *AJOB Neuroscience*, *1*(3), 22-33.

November 18, 2020: Neuroscience, Culture, & Intergroup Relations

Ames, D., & Fiske, S. (2010). Cultural Neuroscience. Asian Journal of Social *Psychology*, 13, 72–82.

Amodio, D. M. (2014). The neuroscience of prejudice and stereotyping. *Nature Reviews Neuroscience*, *15*, 670–682.

Harris, L. T., & Fiske, S. T. (2011). Dehumanized perception: A psychological means to facilitate atrocities, torture, and genocide? *Zeitschrift für Psychologie/Journal of Psychology*, *219*(3), 175-181.

Hughes, B. L., Ambady, N., Zaki, J. (2017). Trusting outgroup, but not ingroup members, requires control: neural and behavioral evidence. *Social Cognitive and Affective Neuroscience*, *12*(3), 372–381.

Quadflieg, S., Turk, D. J., Waiter, G. D., Mitchell, J. P., Jenkins, A. C., & Macrae, C. N. (2009). Exploring the neural correlates of social stereotyping. *Journal of Cognitive Neuroscience*, *21*(8), 1560-1570.

Recommended but optional:

Brosch, T., Bar-David, E., & Phelps, E. A. (2013). Implicit Race Bias Decreases the Similarity of Neural Representations of Black and White Faces. *Psychological Science*, 24(2), 160-166.

November 25, 2020: Canceled due to the Thanksgiving Holiday

December 2, 2020: The "Neuro-" Prefix: Neuromarketing & Neuropolitics

Amodio, D. M., Jost, J. T., Master, S. L., & Yee, C. M. (2007). Neurocognitive correlates of liberalism and conservatism. *Nature Neuroscience*, *10*(10), 1246-1247.

Falk, E., Berkman, E., & Lieberman, M.D. (2012). From neural responses to population behavior: Neural focus groups predict population-level media effects. *Psychological* <u>Science, 23(5), 439-445.</u>

Krastev, S., McGuire, J. T., McNeney, D., Kable, J. W., Stolle, D., Gidengil, E., & Fellows, L. K. (2016). Do Political and Economic Choices Rely on Common Neural Substrates? A Systematic Review of the Emerging Neuropolitics Literature. *Frontiers in Psychology, Frontiers in Psychology*, *7*, 1-10. doi: 10.3389/fpsyg.2016.00264. Plassmann, H., O'Doherty, J., Shiv, B., & Rangel, A. (2008). Marketing actions can modulate neural representations of experienced pleasantness. *Proceedings of the National Academy of Sciences, 105*(3), 1050-1054.

<u>Plassman H., Venkatraman V., Huettel, S., & Yoon, C. (2015). Consumer</u> <u>Neuroscience: Applications, Challenges, and Possible Solutions. *Journal of Marketing* <u>Research, 52(4), 427–435.</u></u>

Optional but recommended:

Ariely, D. & Berns, G. S. (2010) Neuromarketing: The hope and hype of neuroimaging in business. *Nature Reviews Neuroscience*, *11*(4), 284-292.

Jost, J.T., & Amodio, D.M. (2011). Political ideology as motivated social cognition: Behavioral and neuroscientific evidence. *Motivation and Emotion*, *36*(1), 55–64.

December 9, 2020: The "Neuro-" Prefix: Neurohumanities & Neuroaesthetics

Brown, S., Gao, X., Tisdelle, L., Eickhoff, S. B., & Liotti, M. (2011). Naturalizing aesthetics: Brain areas for aesthetic appraisal across sensory modalities. *Neuroimage*, *58*(1), 250-258.

Chatterjee, A., & Vartanian, O. (2014). Neuroaesthetics. *Trends in cognitive sciences*, 18(7), 370-375.

Rapp, A. M., Mutschler, D. E., Erb, M. (2012). Where in the brain is nonliteral language? A coordinate-based meta-analysis of functional magnetic resonance imaging studies. *NeuroImage*, *63*(1), 600-610.

Zatorre, R. J., & Salimpoor, V. N. (2013). From perception to pleasure: music and its neural substrates. *Proceedings of the National Academy of Sciences*, *110*(Supplement 2), 10430-10437.

Kandel, E. R. (2013). What the brain can tell us about art. *New York Times Sunday Review*, April 12, 2013, 14.

(Video) Cyborg artist Neil Harbisson and Moon Ribas on physically merging oneself with technology

Optional:

Thierry, G., Martin, C. D., Gonzalez-Diaz, V., Rezaie, R., Roberts, N., & Davis, P. M. (2008). Event-related potential characterisation of the Shakespearean functional shift in narrative sentence structure. *Neuroimage*, *40*(2), 923-931.

December 14, 2020: FINAL PAPERS DUE

Course requirements:

<u>Class preparation and participation</u>: The assigned readings are designed to expand your knowledge of neuroscience and to hone your critical thinking skills. The topics we'll tackle this semester are complex, so we will have a lot to discuss and debate. Strong preparation and participation will enable us to have high-level, thought-provoking discussion.

Thorough reading enables thoughtful discussion. Towards that end, you will be asked to submit a short (one-paragraph) reading response to CourseWorks by 9:00pm the night before each class period. The goal of these reading responses is to help you keep current on course topics. The reading responses also help me to understand where you may have had difficulty with the readings and which topics you were most intrigued by and, therefore, which areas may warrant more focus during class time. Each reading response should be no more than a short paragraph, either discussing something interesting you found in the readings or asking substantive questions about concepts in the reading you found challenging. As the goal of these assignments is to keep you up to speed and to help guide my teaching and our class discussions, the assignments will just be graded on a pass/fail basis. (I can only accept responses submitted before the deadline.)

When discussing the implications and applications of neuroscience findings to societal issues, there is a great deal of gray area and many more questions than answers. In many ways, there are no right vs. wrong answers – but there are more vs. less carefully and thoughtfully argued answers. To ensure that everyone is accountable for thoroughly engaging with the material during class discussions, your active participation in these discussions will contribute to your final grade. I do understand that for some people participating regularly in class discussions can be difficult. Those students who might be concerned about their ability to contribute to class discussions should see me. In such cases, we might be able to work out a way for you to participate thoughtfully through your reading responses.

Generally speaking, effective class preparation and participation could include:

- Asking insightful or clarifying questions.
- Connecting the reading to other reading we've done in the course or reading you've done on your own, drawing parallels and/or contrasts among findings.
- Actively listening to fellow classmates and responding to their ideas.

- Offering thoughtful critiques of the research methodology and providing suggestions for how it might be improved.
- Bringing in outside sources potentially from the news media or other sources that shed light on neuroscience findings or that illustrate ways in which these findings are interpreted and applied.

<u>Leading discussions</u>: You will be responsible for presenting an article and leading the class discussion for at least one class meeting. I'll provide more information and give a demonstration of the sort of presentation I'm looking for in the first week of class. But, briefly, you'll walk us through your assigned article, describing the methods and results, highlighting any strengths or weaknesses of the study design, and giving your thoughts on the meaning and importance of the findings. I'll ask you to complete a handout and email that to me at least three days before the date of your presentation, so that I can provide feedback in advance of your actual presentations.

<u>Societal issue paper</u>: Early in the course, you will be asked to choose a societal issue or problem on which neuroscience might shed some light. The range of potential topics is almost limitless but could include such topics as universal early childhood education, addiction, PTSD, aging, traumatic brain injury in sports or combat, etc. etc. You just want to choose a topic that is appropriately narrow to address in an 8-10 page paper.

We will discuss this paper in greater depth during class, but, briefly, you'll be asked to submit a proposal, a first draft, and a final draft. You'll first be asked to submit a topic proposal, which will include a short paragraph about your intended topic and a list of references you intend to use. I will make suggestions regarding focus, potential sources, etc. Once your topic is approved, you will begin work on a first draft of the paper. The paper will first describe the societal problem or issue, then review some key findings from human neuroscience that bear on the issue, and finally analyze how this research suggests potential remedies or interventions, how it problematizes the issue, how it calls into question previous approaches to the issue, how it might be misinterpreted or misapplied, and so on.

Good writing is good thinking, and a primary goal of this assignment is to help you hone your writing and critical thinking skills. Towards that end, I will provide comments and suggestions on your first draft, and you will be expected to make substantive changes – not just copyediting, but rather larger edits such as, reworking entire sections, drawing on new sources, and providing more analysis. The final draft of the paper will be graded not only as a standalone paper but also in how it demonstrates improvement upon the earlier draft.

Grading: Grades will be calculated based on the percentages outlined below.

1.	Class preparation and		
	participation35%		
	0	Reading responses 10%	
	0	Contribution to class discussion 25%	
2.	Discussion leading25%		
3.	Societal i	cietal issue paper40%	
	0	Proposal	
	0	5%	
	0	First draft 5%	
	0	Final draft 25%	
	0	Paper procentation 5%	

• Paper presentation 5%

Class policies:

<u>Academic integrity</u>: As members of this academic community, we are responsible for maintaining the highest level of personal and academic integrity: "[E]ach one of us bears the responsibility to participate in scholarly discourse and research in a manner characterized by intellectual honesty and scholarly integrity.... The exchange of ideas relies upon a mutual trust that sources, opinions, facts, and insights will be properly noted and carefully credited. In practical terms, this means that, as students, you must be responsible for the full citations of others' ideas in all of your research papers and projects... [and] you must always submit your own work and not that of another student, scholar, or internet agent" (from the Columbia University Faculty Statement on Academic Integrity:

https://www.college.columbia.edu/faculty/resourcesforinstructors/academicintegrity/state ment

<u>Plagiarism</u>: whether intentional or inadvertent – is a serious violation of academic integrity. If you have any questions about what constitutes plagiarism and/or how to properly cite sources, please come to me. I am more than happy to help. Similarly, if you put yourself in a situation, e.g., starting an assignment very late, in which you think your best option might be to cut some corners, see me. It is far better to have a few points deducted from a paper than to compromise your academic integrity and potentially put your academic standing in jeopardy.

<u>Attendance</u>: Class participation is the foundation of this course. Of course, there are times when life gets in the way of things, but more than one absence will be detrimental to your learning – and to your grade. As long as an excused absence is documented (e.g., a dean's note), it will not negatively impact your grade, but please inform me of

the absence as soon as possible. You will still be responsible for the work due in that class, e.g., reading responses and interim deadlines for the final paper.

<u>Late assignments</u>: It is not fair for you to get more time on your assignments than your peers. If there's an appropriate reason for turning an assignment in late, please discuss it with me well in advance so that we can work out an arrangement. I will have to penalize late assignments.

<u>Class Etiquette</u>: Research shows that many of us think we're good multi-taskers. Research also shows that most of us are not. If you typically take notes or read papers on a laptop, you can, of course, use the laptop in class. But, out of respect for your classmates and in the interest of your own learning and ability to actively participate in class discussions, please refrain from using your laptop inappropriately.

<u>Students with Disabilities</u>: Students with special needs who may require classroom/assignment accommodations should make an appointment with me before or during the first week of class. You should also contact the Office of Disability Services (ODS) in Lerner Hall before the start of the course to register for these accommodations. The procedures for registering with ODS can be found at <u>http://health.columbia.edu/services/ods</u> or by calling (212) 854-2388.

*Syllabus is subject to revision. Updates will be posted on CourseWorks/Canvas.