Pain: Body and Mind

Psyc 429

Fall, 2019

Teaching is Monday 2:30 to 4:00 and Thursday 4:00-5:30 in Walter Light Hall, room 212

Instructor: Dr. Tim Salomons
Humphrey Hall, 354
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Office Hours: Monday 4-5, or by appointment

Intended Student Learning Outcomes

To complete this course students will demonstrate their ability to:

1. Identify and analyze critical issues in pain research and treatment
2. Compare, contrast, and synthesise arguments pertaining to these issues, providing empirical support
3. Examine the link between structure and function in pain mechanisms
4. Appraise pain treatments on the basis of current research

Course Outline

Seminar 1	(09/09)	Introduction and Opening Discussion
Seminar 2	(12/09)	What is Pain?
Seminar 3	(16/09)	Pain: Body and Mind
Seminar 4	(19/09)	**Discussion:** Is an objective measure of pain possible?
Seminar 5	(23/09)	How Do We Communicate Pain?
Seminar 6	(26/09)	**Discussion:** Specificity or pattern?
Seminar 7	(30/09)	Pain Physiology (History and the Periphery)
Seminar 8	(03/10)	**Discussion:** Is the anterior cingulate selective for pain?
Seminar 9	(07/10)	Pain Physiology (The Brain)
Seminar 10	(10/10)	**Discussion:** Is there such a thing as a "pain prone patient"
	(14/10)	NO CLASS
Seminar 11	(17/10)	The Psychology of Pain
Seminar 12	(21/10)	**Discussion:** Should emotional or social "pain" be called pain?
	(24/10)	NO CLASS
Seminar 13	(28/10)	Psychological Models and Interventions
Seminar 14	(31/10)	Chronic Pain Panel Discussion
Seminar 15	(04/11)	Clinical pain disorders and treatments
Seminar 16	(07/11)	**Discussion**: Are opioids worth the risk?
Seminar 17	(11/11)	**Discussion**: Is pain the best treatment target for chronic pain?
Seminar 18	(14/11)	**Discussion**: Do fish feel pain?
Seminar 19	(18/11)	**Discussion**: Should pain diagnoses only be based on mechanisms?
Seminar 20	(21/11)	**Discussion**: Is pain inherently social?
Seminar 21	(25/11)	**Discussion**: Should race, culture and gender be considerations when treating pain?

READING LIST

Seminar 1: **Introduction and Opening Discussion**

Seminar 2: What is Pain?

Required Readings

Aydede M (2017) Defending the IASP Definition of Pain, ***The Monist*** 100 (4):439–457 (stop at Appendix)

Williams AC, Craig KD. (2016) Updating the definition of pain, Pain 157(11):2420-2423.
See rebuttal: Wright, A., & Aydede, M. (2017). Critical comments on Williams and Craig's recent proposal for revising the definition of pain. *Pain*, *158*(2), 362-363.
And reply by Williams & Craig *Pain*, *158*(2), 363-365

Cohen, M., Quintner, J., & van Rysewyk, S. (2018). Reconsidering the International Association for the Study of Pain definition of pain. *Pain reports*, *3*(2): e634. doi: 10.1097/PR9.0000000000000634

Suggested Readings

Aydede M (2017) Defending the IASP Definition of Pain, ***The Monist*** 100 (4):457–464 (Appendix: Is the IASP Definition Merely and Operational Definition)

Fields, Howard L. "Pain: an unpleasant topic." *Pain* 82 (1999): S61-S69.

Duncan, G. (2017). The Meanings of 'Pain'in Historical, Social, and Political Context. *The Monist*, *100*(4), 514-531.

Seminar 3: **Pain: Body and Mind**

Required Readings:

Melzack and Wall (1996) "Pain and Injury: the Variable Link" in The Challenge of Pain 2nd Edition, pp. 4-14

Wall (2000) "The Philosophy of Pain" in Pain: The Science of Suffering 1st Edition, pp 17-30

Machery, Edouard, and Justin Sytsma. "Robot pains and corporate feelings." *The Philosophers' Magazine* 52 (2011): 78-82.

Aydede (2009) "Pain" in Stanford Encyclopedia of Philosophy pp. 2-12

Suggested Readings:

Aydede (2009) "Pain" in Stanford Encyclopedia of Philosophy pp. 12-58

Price, Donald D. "Psychological and neural mechanisms of the affective dimension of pain." *Science* 288.5472 (2000): 1769-1772.

Seminar 4: Discussion: Is an objective measure of pain possible?

Required Readings:

Derbyshire, S. W. (2016). Pain and the Dangers of Objectivity. In *Meanings of Pain* (pp. 23-36). Springer, Cham.

Cowen, R., Stasiowska, M. K., Laycock, H., & Bantel, C. (2015). Assessing pain objectively: the use of physiological markers. *Anaesthesia*, *70*(7), 828-847.

Readings to Review:
Aydede (2009) "Pain" in Stanford Encyclopedia of Philosophy pp. 2-12 (Seminar 3)

Seminar 5: **How Do We Communicate Pain?**

Required Readings:
Coghill, RC (2005) Pain: Making the private experience public in Aydede, M. (2005). Pain: new essays on its nature and the methodology of its study. Pp 299-305

Tait, R. C., Chibnall, J. T., & Kalauokalani, D. (2009). Provider judgments of patients in pain: seeking symptom certainty. *Pain Medicine*, *10*(1), 11-34.

http://www.bbc.com/future/story/20170110-why-pain-is-so-hard-to-measure---and-treat

Prkachin KM, Solomon PE, Ross J. Underestimation of pain by health-care providers: towards a model of the process of inferring pain in others. Can J Nurs Res. 2007 Jun;39(2):88-106. Review. PubMed PMID: 17679587.

Suggested Readings:
Turk and Melzack (2011) The Measurement of Pain and the Assessment of People Experiencing Pain in Turk, D. C., & Melzack, R. (Eds.). (2011). *Handbook of pain assessment*. Guilford Press. Pp 3-16.

Fillingim, R. B., Loeser, J. D., Baron, R., & Edwards, R. R. (2016). Assessment of chronic pain: domains, methods, and mechanisms. *The Journal of Pain*, *17*(9), T10-T20.
http://www.jpain.org/article/S1526-5900(15)00865-2/fulltext

Broderick JE, Stone AA, Calvanese P, Schwartz JE, Turk DC. Recalled pain ratings: a complex and poorly defined task. J Pain. 2006 Feb;7(2):142-9. PubMed PMID: 16459280.

Bačkonja MM, Farrar JT. Are Pain Ratings Irrelevant? Pain Med. 2015 Jul;16(7):1247-50. doi: 10.1111/pme.12748. PubMed PMID: 26176790.

Seminar 6 **Discussion**: Specificity or pattern?

Required Readings:
Basbaum "Specificity Versus Patterning Theory: Continuing the Debate"
Woolf "Transcending Specificity"
Casey "Ghosts of Pattern and Specificity"
Fields "untitled"
Apkarian "A theoretical view of ghosts"
In Pain Research Forum, available online at http://www.painresearchforum.org/forums/discussion/7347-specificity-versus-patterning-theory-continuing-debate
(or google "Pain Research Forum Specificity versus Patterning")

Melzack, R. (1999). From the gate to the neuromatrix. *Pain*, *82*, S121-S126.

Seminar 7 **Pain Physiology (History and the Periphery)**

Required Readings:
Melzack and Wall (1996) "The Evolution of Pain Theories" in The Challenge of Pain 2nd Edition, pp. 149-164

Perl, Edward R. "Ideas about pain, a historical view." *Nature Reviews Neuroscience* 8.1 (2007): 71-80.

Grahek, N. (2007) "The biological function and importance of pain" in Feeling Pain and Being in Pain pp. 7-28

Suggested Readings:
Melzack R, Wall PD. Pain mechanisms: a new theory. Science. 1965 Nov 19;150(3699):971-9. Review. PubMed PMID: 5320816

Craig, A. D. (2003). A new view of pain as a homeostatic emotion. *Trends in Neurosciences*, *26*(6), 303-307.

Seminar 8 Discussion: Is the anterior cingulate selective for pain?

Required Readings:
Lieberman, M. D., & Eisenberger, N. I. (2015). The dorsal anterior cingulate cortex is selective for pain: Results from large-scale reverse inference. *Proceedings of the National Academy of Sciences*, *112*(49), 15250-15255.

And see rebuttals

Wager, T. D., Atlas, L. Y., Botvinick, M. M., Chang, L. J., Coghill, R. C., Davis, K. D., ... & Yarkoni, T. (2016). Pain in the ACC?. *Proceedings of the National Academy of Sciences*, *113*(18), E2474-E2475.

http://shackmanlab.org/the-importance-of-respecting-variation-in-cingulate-anatomy-comment-on-lieberman-eisenberger-2015-and-yarkoni/

http://www.talyarkoni.org/blog/2015/12/05/no-the-dorsal-anterior-cingulate-is-not-selective-for-pain-comment-on-lieberman-and-eisenberger-2015/

Seminar 9 Pain Physiology (The Brain)

Required Readings:
Salomons TV, (2018) Pain as an embodied emotion. In Fox AS, Lapate RC, Shackman AJ & Davidson RJ (Eds). pp. 291-298The nature of emotion. Fundamental questions (2nd ed.). New York: Oxford University Press.

Iannetti, G. D., Salomons, T. V., Moayedi, M., Mouraux, A., & Davis, K. D. (2013). Beyond metaphor: contrasting mechanisms of social and physical pain. *Trends in cognitive sciences*, *17*(8), 371-378.

Wager, T. D., Atlas, L. Y., Lindquist, M. A., Roy, M., Woo, C. W., & Kross, E. (2013). An fMRI-based neurologic signature of physical pain. *New England Journal of Medicine*, *368*(15), 1388-1397.

Suggested Readings:
Tracey, I., & Mantyh, P. W. (2007). The cerebral signature for pain perception and its modulation. *Neuron*, *55*(3), 377-391.

Baliki, M. N., Petre, B., Torbey, S., Herrmann, K. M., Huang, L., Schnitzer, T.J., ... & Apkarian, A. V. (2012). Corticostriatal functional connectivity predicts transition to chronic back pain. *Nature Neuroscience*, *15*(8), 1117-1119.

Shackman, Alexander J., et al. "The integration of negative affect, pain and cognitive control in the cingulate cortex." *Nature Reviews Neuroscience* 12.3 (2011): 154-167.

Feinstein, Justin S., et al. "Preserved emotional awareness of pain in a patient with extensive bilateral damage to the insula, anterior cingulate, and amygdala." *Brain Structure and Function* 221.3 (2016): 1499-1511.

Salomons, T. V., Iannetti, G. D., Liang, M., & Wood, J. N. (2016). The "pain matrix" in pain-free individuals. *JAMA neurology*, *73*(6), 755-756.

Seminar 10 Discussion: Is there such a thing as a "pain prone patient"

Required Readings:

Engel, G. L. (1959). "Psychogenic" pain and the pain-prone patient. *The American Journal of Medicine*, *26*(6), 899-918.

Melzack and Wall (1996) "The Psychology of Pain" in The Challenge of Pain 2nd Edition, pp. 15-33

Sullivan and Baden (2011) Assessment of Psychiatric Disorders in Turk, D. C., & Melzack, R. (Eds.). (2011). *Handbook of pain assessment*. Guilford Press. Pp 407-411 (start at "Somatoform Disorders)

Suggested Readings:

Sullivan and Baden (2011) Assessment of Psychiatric Disorders in Turk, D. C., & Melzack, R. (Eds.). (2011). *Handbook of pain assessment*. Guilford Press. Pp 399-407 (up to "Somatoform Disorders)

Seminar 11 The Psychology of Pain

Required Readings:

Large, R. G. (1996). Psychological aspects of pain. *Annals of the Rheumatic Diseases*, *55*(6), 340–345.

Wiech K. (2016) Deconstructing the sensation of pain: The influence of cognitive processes on pain perception. Science. 354(6312):584-587

Katz, J., Rosenbloom, B. N., & Fashler, S. (2015). Chronic Pain, Psychopathology, and DSM-5 Somatic Symptom Disorder. *Canadian Journal of Psychiatry. Revue Canadienne de Psychiatrie*, *60*(4), 160–167.

Suggested Readings:

Fields, Howard L. "Pain: an unpleasant topic." *Pain* 82 (1999): S61-S69.

Price, Donald D. "Psychological and neural mechanisms of the affective dimension of pain." *Science* 288.5472 (2000): 1769-1772.

Turk, D. C., Fillingim, R. B., Ohrbach, R., & Patel, K. V. (2016). Assessment of psychosocial and functional impact of chronic pain. *The Journal of Pain*, *17*(9), T21-T49.

Bushnell, M. C., Čeko, M., & Low, L. A. (2013). Cognitive and emotional control of pain and its disruption in chronic pain. *Nature Reviews. Neuroscience*, *14*(7), 502–511. http://doi.org/10.1038/nrn3516

Aydede, Murat, and Güven Güzeldere. "Some foundational problems in the scientific study of pain." *Philosophy of Science* 69.S3 (2002): S265-S283.

Seminar 12 Discussion: Should emotional or social "pain" be called pain?

Required Reading:

Eisenberger, N. I., & Lieberman, M. D. (2005). Why It Hurts to Be Left Out: The Neurocognitive Overlap Between Physical and Social Pain. In K. D. Williams, J. P. Forgas, & W. von Hippel (Eds.), ***Sydney Symposium of Social Psychology series. The social outcast: Ostracism, social exclusion, rejection, and bullying*** (pp. 109-127). New York, NY, US: Psychology Press.

Readings to Review:

Iannetti, G. D., Salomons, T. V., Moayedi, M., Mouraux, A., & Davis, K. D. (2013). Beyond metaphor: contrasting mechanisms of social and physical pain. *Trends in cognitive sciences*, *17*(8), 371-378.

Seminar 13 Psychological Models and Interventions

Required Readings:

Jensen, M. P., & Turk, D. C. (2014). Contributions of psychology to the understanding and treatment of people with chronic pain: Why it matters to ALL psychologists. *American Psychologist*, *69*(2), 105-118.

Edwards, R. R., Dworkin, R. H., Sullivan, M. D., Turk, D. C., & Wasan, A. D. (2016). The role of psychosocial processes in the development and maintenance of chronic pain. *The Journal of Pain*, *17*(9), T70-T92

Asmundson, Gordon & gómez, Lydia & Richter, Ashley & Carleton, R. Nicholas. (2012). The Psychology of Pain: Models and Targets for Comprehensive Assessment.

Suggested Readings:

Crofford, L. J. (2015). Chronic Pain: Where the Body Meets the Brain. *Transactions of the American Clinical and Climatological Association*, *126*, 167–183.

The Joint Commission on Accreditation of Healthcare Organizations (2001) Pain: Current understanding of assessment, management and treatment. Read Chapter 1 "Background and Significance" pp 3-17

Bridges, S. (2012). Chronic pain. *Health, social care and lifestyles*, 291. http://content.digital.nhs.uk/catalogue/PUB09300/HSE2011-Ch9-Chronic-Pain.pdf

Apkarian AV, Baliki MN, Geha PY. Towards a theory of chronic pain. Prog Neurobiol. 2009 Feb;87(2):81-97.

Seminar 14 Chronic pain panel discussion

Required Reading:

"Living With Pain", Claire Sudduth, Time Magazine, March 11, 2011. http://content.time.com/time/specials/packages/article/0,28804,2053382_2055269_2055261-1,00.html

Seminar 15 Clinical pain disorders and treatments

Required Reading:
https://en.wikipedia.org/wiki/Chronic_pain

Turk, D. C., Wilson, H. D., & Cahana, A. (2011). Treatment of chronic non-cancer pain. *The Lancet*, *377*(9784), 2226-2235.

Wall (2000) "How Treatments Work" in Pain: The Science of Suffering 1st Edition, pp 107-124

Readings to Review
Large, R. G. (1996). Psychological aspects of pain. *Annals of the Rheumatic Diseases*, *55*(6), 340–345.

Seminar 16 Discussion: Are opioids worth the risk?

Required Reading:
Furlan, A. D., Sandoval, J. A., Mailis-Gagnon, A., & Tunks, E. (2006). Opioids for chronic noncancer pain: a meta-analysis of effectiveness and side effects. *Canadian Medical Association Journal*, *174*(11), 1589-1594.

https://harpers.org/archive/2018/04/the-pain-refugees/

https://www.nytimes.com/interactive/2017/08/03/upshot/opioid-drug-overdose-epidemic.html

Suggested Reading:
https://www.newyorker.com/magazine/2017/10/30/the-family-that-built-an-empire-of-pain

https://www.huffingtonpost.ca/beth-darnall/opioids-limit_b_10374856.html

https://www.theatlantic.com/health/archive/2018/06/opioid-epidemic/563576/

Seminar 17 Discussion: Is pain the best treatment target for chronic pain?

Required Reading:
Ballantyne, J. C., & Sullivan, M. D. (2015). Intensity of chronic pain—the wrong metric?. *New England Journal of Medicine*, *373*(22), 2098-2099.

Seminar 18 Discussion: Do fish feel pain?

Required Reading:
Braithwaite, V. A., & Boulcott, P. (2007). Pain perception, aversion and fear in fish. *Diseases of aquatic organisms*, *75*(2), 131-138.

Key, B. (2015). Fish do not feel pain and its implications for understanding phenomenal consciousness. *Biology & philosophy*, *30*(2), 149-165.

Seminar 19 Discussion: Should pain diagnoses only be based on mechanisms?

Required Reading:
Finnerup, N. B., & Jensen, T. S. (2006). Mechanisms of disease: mechanism-based classification of neuropathic pain—a critical analysis. *Nature Reviews Neurology*, *2*(2), 107.

Wall (2000) "Pain Without a Cause" in Pain: The Science of Suffering 1st Edition, pp 93-106

Recommended Reading: Vardeh, D., Mannion, R. J., & Woolf, C. J. (2016). Toward a mechanism-based approach to pain diagnosis. *The Journal of Pain*, *17*(9), T50-T69.

Seminar 20 **Discussion: Is pain inherently social?**

Required Reading:

http://psychology.jrank.org/human-behavior/pages/cmxyrs6alw/private-events-verbal-individual.html

Readings to Review:

Aydede (2009) "Pain" in Stanford Encyclopedia of Philosophy pp. 2-12 (Seminar 3)

Williams AC, Craig KD. (2016) Updating the definition of pain, Pain 157(11):2420-2423. (Seminar 2)

Coghill, RC (2005) Pain: Making the private experience public in Aydede, M. (2005). Pain: new essays on its nature and the methodology of its study. Pp 299-305 (Seminar 5)

Seminar 21 **Discussion:** Should race, culture and gender be considerations when treating pain?

Required Reading:

Wall (2000) "Cultural Stereotypes" in Pain: The Science of Suffering 1st Edition, pp 67-70

Readings to Review:

Tait, R. C., Chibnall, J. T., & Kalauokalani, D. (2009). Provider judgments of patients in pain: seeking symptom certainty. *Pain Medicine*, *10*(1), 11-34.

Melzack and Wall (1996) "The Psychology of Pain" in The Challenge of Pain 2nd Edition, pp. 15-33

Grading Scheme [*See Section 2]*

Weekly multiple choice questions	15%	Beginning of class Monday
In-class presentation 1	25%	See presentation schedule
In-class presentation 2	25%	See presentation schedule
Final paper	30%	December 11th*
Participation	5%	

*Students are encouraged to aim to hand this assignment in for November 29th so as to not overlap with exams

Multiple choice questions will be made available online and will be directly based on the week's readings (including readings for both Monday and Thursday seminars). They can be completed in an "open book" fashion. Answers will be discussed in groups at the beginning of each Monday seminar. The point of these questions is to ensure students come to class familiar with the readings, and ready to talk about them. Students who do the readings should do well on the questions.

The seminars marked **Discussion** will be led by two teams (generally made up of 2, but occasionally 3 students). Each team will be assigned one side of an issue and will be responsible for putting together a 10-15 minute presentation, in which they make the strongest possible argument for that side of the argument, *regardless of whether they agree with the argument*. The two teams will subsequently be responsible for leading the discussion on that topic. The two teams should consider meeting to coordinate their leading of discussion. This might be done by formulating questions to stimulate discussion, as well as by talking amongst themselves to formulate more nuanced views of the issue at hand. Although readings have been provided for these Discussions, teams are expected to go beyond these readings in preparing their arguments. Although both teams will be preparing arguments for one side of the issue, this is not a competition! You will not be judged more harshly simply because one side of an argument is naturally more compelling. You

simply need to make the best, empirically supported case for the side you have been assigned. Marks will be assigned for the content of the presentation (coherence of the argument, empirical support etc.), as well as for facilitation of discussion. 20 of the 25 marks will be assigned to the group (half for the presentation and half for facilitation of discussion), with an additional 5 given to each individual in the group for their participation.

The final paper will be a short summary/overview (approximately 1000 words, no more than 1500) of the issue, briefly outlining both sides of the argument and presenting key considerations in reconciling/resolving the arguments. These should include references (but references will not be included in word count). Students can write on either of the two Discussion topics they participated in.

The goal of the course is to foster informed discussion of important topics in basic and clinical pain science. Discussion can't occur without participation, so 5% of the mark will be given for attendance and participation in discussions throughout the course. Students will be excused for up to 2 absences, more absences may begin to affect their participation mark.

Grading Method

All components of this course will receive numerical percentage marks. The final grade you receive for the course will be derived by converting your numerical course average to a letter grade according to Queen's Official Grade Conversion Scale:

Queen's Official Grade Conversion Scale

Grade	Numerical Course Average (Range)
A+	90-100
A	85-89
A-	80-84
B+	77-79
B	73-76
B-	70-72
C+	67-69
C	63-66
C-	60-62
D+	57-59
D	53-56
D-	50-52
F	49 and below

Late Policy: For the final paper, there will be a late penalty of 5% per day. For weekly multiple choice questions, late submission is not possible and students who have not submitted prior to the start of class on Tuesday will not receive any credit for those questions.

Academic Integrity

Academic Integrity is constituted by the six core fundamental values of honesty, trust, fairness, respect, responsibility and courage (see www.academicintegrity.org). These values are central to the building, nurturing and sustaining of an academic community in which all members of the community will thrive. Adherence to the values expressed through academic integrity forms a foundation for the "freedom of inquiry and exchange of ideas" essential to the intellectual life of the University (see the Senate Report on Principles and Priorities http://www.queensu.ca/secretariat/policies/senate/report-principles-and-priorities).

Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their assignments conform to the principles of academic integrity. Information on academic integrity is available in the Arts and Science Calendar (see Academic Regulation 1 http://www.queensu.ca/artsci/academic-calendars/regulations/academic-regulations/regulation-1), on the Arts and Science website (see http://www.queensu.ca/artsci/academics/undergraduate/academic-integrity), and from the instructor of this course. Departures from academic integrity include plagiarism, use of unauthorized materials, facilitation, forgery and falsification, and are antithetical to the development of an academic community at Queen's. Given the seriousness of these matters, actions which contravene the regulation on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university.

Turnitin Statement

This course makes use of Turnitin, a third-party application that helps maintain standards of excellence in academic integrity. Normally, students will be required to submit their course assignments to through onQ to Turnitin. In doing so, students' work will be included as source documents in the Turnitin reference database, where they will be used solely for the purpose of detecting plagiarism.

Turnitin is a suite of tools that provide instructors with information about the authenticity of submitted work and facilitates the process of grading. Turnitin compares submitted files against its extensive database of content, and produces a similarity report and a similarity score for each assignment. A similarity score is the percentage of a document that is similar to content held within the database. Turnitin does not determine if an instance of plagiarism has occurred. Instead, it gives instructors the information they need to determine the authenticity of work as a part of a larger process.

Please read Turnitin's Privacy Pledge, Privacy Policy, and Terms of Service, which governs users' relationship with Turnitin. Also, please note that Turnitin uses cookies and other tracking technologies; however, in its service contract with Queen's Turnitin has agreed that neither Turnitin nor its third- party partners will use data collected through cookies or other tracking technologies for marketing or advertising purposes. For further information about how you can exercise control over cookies, see Turnitin's Privacy Policy:

Turnitin may provide other services that are not connected to the purpose for which Queen's University has engaged Turnitin. Your independent use of Turnitin's other services is subject solely to Turnitin's Terms of Service and Privacy Policy, and Queen's University has no liability for any independent interaction you choose to have with Turnitin.

3. Privacy Statement for Instructors Who Use External Software in Their Course

This course makes use of Turnitin for detecting plagiarism and academic misconduct. Be aware that by logging into the site, you will be leaving onQ, and accessing [the name of company's] website and [name of software application]. Your independent use of that site*, beyond what is required for the course (for example, purchasing the company's products),* is subject to [name of company's] terms of use and privacy policy. You are encouraged to review these documents, using the link(s) below, before using the site.

- Turnitin - http://turnitin.com/en_us/about-us/privacy

4. Accommodations for Disabilities

Queen's University is committed to achieving full accessibility for people with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. The Senate Policy for Accommodations for Students with Disabilities was approved at Senate in November 2016 (see https://www.queensu.ca/secretariat/sites/webpublish.queensu.ca.uslcwww/files/files/policies/senate-andtrustees/ACADACCOMMPOLICY2016.pdf). If you are a student with a disability and think you may need academic accommodations, you are strongly encouraged to contact the Queen's Student Accessibility Services (QSAS) and register as early as possible. For more information, including important deadlines, please visit the QSAS website at: http://www.queensu.ca/studentwellness/accessibility-services/

5. Academic Consideration for Students with Extenuating Circumstances

Queen's University is committed to providing academic consideration to students experiencing extenuating circumstances that are beyond their control and are interfering with their ability to complete academic requirements related to a course for a short period of time, not to exceed three months. Students receiving academic consideration must meet all essential requirements of a course. The Senate Policy on Academic Consideration for Students in Extenuating Circumstances was approved at Senate in April, 2017 (see http://www.queensu.ca/secretariat/sites/webpublish.queensu.ca.uslcwww/files/files/policies/senate-andtrustees/Academic%20Considerations%20for%20Extenuating%20Circumstances%20Policy%20Final.pdf) Each Faculty has developed a protocol to provide a consistent and equitable approach in dealing with requests for academic consideration for students facing extenuating circumstances. Arts and Science undergraduate students can find the Faculty of Arts and Science protocol and the portal where a request can be submitted at: http://www.queensu.ca/artsci/accommodations. Students in other Faculties and Schools who are enrolled in this course should refer to the protocol for their home Faculty.

If you need to request academic consideration for this course, you will be required to provide the name and email address of the instructor/coordinator. Please use the following:

Tim Salomons
tim.salomons@queensu.ca