



**ITIS 5414**

**Emerging Information Technologies and Business Innovation**

**Fall B 2014 – Thursdays 6:05-8:55 pm**

**Room tba (Nov 6, 13, 20, 27, Dec 4, 11)**

Instructor: David Hudson  
Email: david.hudson@carleton.ca  
Office Hours: After class and by appointment. Please email to arrange.

**Course Description:**

Information technology (IT) is used in most businesses and includes an enormous range of software, hardware and Internet services. IT use evolves in both evolutionary and discontinuous ways. Because of the diversity of IT and the dependence of firms on IT, new IT has the potential to bring either value or risk (or both) to businesses. When new IT is just emerging, there may be significant debate concerning the potential value of the IT to a business. On the one hand, those who adopt early may innovate to differentiate from competitors or to address new markets. On the other hand, early adopters also face significant risks.

This course examines emerging IT and how such IT can be used for business innovation by established firms as well as new entrants tackling emerging opportunities, including developing markets. This course does not focus on how the IT works or is developed but how it may be understood by businesses when the IT is quite new. This course will include a combination of lectures and seminars. The instructor will lead the lectures to provide a framework for the seminars to follow. Students will lead and participate in the seminars.

**Learning Objectives:**

This course will equip students to understand:

- What characterizes emerging IT
- How IT use can bring business innovation
- How to evaluate the relevance of emerging IT
- When early adoption brings advantage to an established business

- When emerging IT can allow businesses to address emerging opportunities
- Several examples of emerging IT

The overall objective of the course is to equip students to critically assess new IT in terms of the potential for innovation within their firms.

**Course Restrictions:**

As this course includes student-lead seminars, class attendance is mandatory.

**Course Prerequisites:**

ITIS 5401 or ITIS 5403 for students in the International Development Management Concentration.

**Textbook(s):**

There is no textbook for this course. While the focus of the course is on the application of IT in businesses, there will necessarily be some jargon and technical terminology. Students may find it useful to have a reference text. Any recent university level information technology or information systems overview textbook would be appropriate.

The table below lists the required readings for the course by week. There will be six or seven papers on the required readings list each week (about 60 pages total). The table also identifies some optional readings and other media for each week's topic. While optional, the additional readings focus on IT applications providing illustrations of the IT in use.

Readings can be found online. Most are found through the Business Source Complete, Scholars Portal or the IEEE Xplore databases via the Carleton library online. URLs to publicly available documents are provided below.

**Exam Date:**

There is no exam for this course. The final paper (Emerging Technology Paper) is due on as noted below.

**Drop Course Policy:**

You may drop this course up until the end of the second week of classes. Students that drop a

class in the third week receive a WDN but will automatically have the grade changed to ABS. A grade of ABS is considered a failing grade. Students with relevant medical issues and supporting documentation may petition the School to have the ABS grade changed back to WDN.

**Grading Scheme:**

Class Participation	10%
Critical Analysis #1	15%
Critical Analysis #2	15%
Seminar Leadership	20%
<u>Emerging Technology Paper</u>	<u>40%</u>
<b>Total</b>	<b>100%</b>

All grades are individual except for seminar leadership where a grade will be assigned for each group.

**Class Participation:**

Students are expected to prepare for each class by reading the required reading articles for that week. Students are expected to engage in the discussions in class. The learning objectives will be accomplished, in part, through our interaction and dialog on the topic each week.

Students should come to class prepared to not only discuss the required reading articles, but threads, trends, gaps and other insights observed using the required reading articles. Student participation will be judged on the merit of the contribution to stimulating class discussion, problem-solving and analytical skill. Participation will not be judged on the frequency of participation. Students are encouraged to always attempt to add value to the conversation, and to challenge the ideas of classmates and myself using well-constructed arguments.

There can and should be multiple perspectives on each topic because what makes an instance of IT “emerging”, “innovative” and even “relevant” to business can be hotly debated when that IT is not yet established in widespread use.

**Critical Analysis #1 and #2:**

Each student must submit two brief Critical Analyses. The Critical Analyses can be submitted any week from the second through sixth week of the course and they are due at the beginning of class. For each critical analysis, the student will select 2 of the required readings for that week as well as one additional paper of the student’s own choosing. Using the three papers, the student will provide a brief critical analysis of the main issues discussed in the

papers. Each critical analysis should be 4-5 double-spaced pages long. Referenced articles should be properly cited. The critical analyses will be graded primarily for their content however they should be professionally formatted and presented.

A critical analysis is more than just a summary; it is an evaluation. A critical evaluation does not imply that you find fault with the articles but rather that you determine for yourself whether the arguments the authors make are supported, consistent, relevant and the like. After reading your analysis, a person should understand the authors' main points and whether or not the articles contribute to our understanding of the field – from the point of view of both research and practice. The following framework may aid you in your analysis:

1. Description - As succinctly as possible, summarize the papers.
2. Critical Analysis - What is the contributions of the papers? Why were they published? What are the strengths? What are the limitations? What would you have done differently? Prepare as if you were going to discuss your critical analysis with the author(s).
3. Synthesis - What is the relationship of the papers in your set to each other? With other papers we have discussed? What is common to the three papers?
4. Extension - What insights do you realize? How would you extend the arguments made in the papers? Is further research required? What is the implication of the set of papers on what firms ought to do? Which firms and why?

This framework is not a checklist and need not shape how you organize your critical analysis. A comprehensive analysis need not answer all of the above questions. Consider the above questions as an aid to stimulate your thinking.

The critical analyses are due by 6:00 pm (i.e. just before class begins) on the week where we will discuss the article that you have chosen. Students may submit their critical analyses via email or by giving the instructor a printed copy at class.

### **Seminar Leadership:**

For the first week's class, the instructor will assign students to groups using random.org. Groups of two to three students will be assigned to work together to lead the seminar discussion for the third through sixth weeks of the course.

In leading the seminars, students will

- Review all required reading articles assigned for that day
- Synthesize the most relevant theoretical and practical issues raised in the articles
- Supplement the articles with any other relevant material (videos, cases, etc.)
- Develop a PowerPoint (or similar) presentation to guide the seminar
- Submit the presentation via email before the start of class

- Discuss the presentation with the instructor at least 4 days before the class presentation. Please email an outline or arrange a time to discuss.
- Lead the class through the seminar

The expectation is that seminar leaders will develop ways to engage the class in an interactive dialog. Seminars should not be one-way presentations.

The framework for the critical analyses described above can also be used for seminar preparation. Once again, the framework should not be taken as a template for how to organize the content of the seminar.

The seminar leaders may take advantage of additional material but must cover all of the required readings for that week. Videos and other media may be used but avoid lengthy material that takes away from discussion time.

The assigned group may organize who-does-what in any manner that they choose but the group is expected to conduct a coherent seminar where the various parts are related and where all group members participate.

#### **Emerging Technology Paper:**

The final assignment for the course is an essay of no more than 10-12 double-spaced pages reflecting on a particular set of issues related to emerging technologies and business innovation.

In writing the essay, the student will identify a particular emerging technology (e.g. social media, cloud computing, etc.) or an application area (business, government, non-government organizations, etc.) on which to focus. The chosen emerging technology or application area need not be one that we are discussing in class. The paper should discuss the potential of the technology to drive business innovation, the pros and cons of using such a technology and the realities faced by the organization that adopts this emerging technology.

The essay must not be purely descriptive. The essay should critically analyse the technology or business application chosen and provide insights that have implications for further study on these topic. Students may draw on any of the material discussed in class and are expected to use five to ten sources of their own (preferably articles from refereed academic journals). Students may also draw on their own experiences as well as external sources such as interviews with subject matter experts or industry leaders to provide perspective and context. The paper should be appropriately referenced and properly formatted.

The emerging technology paper may draw on the critical analysis framework provided above. Unlike the critical analyses however, the emerging technology paper is not constrained by a small set of specific articles but by the emerging technology or application area topic that the student selects.

Optionally, students may submit a proposal (i.e. intended topic) for their paper on the second week of classes and a draft on the fourth week of classes. Neither of these will be graded. The instructor will provide feedback to assist the student in the development of their emerging technology paper.

The emerging technology paper is due by 6:00 pm on Sunday December 14. Students may submit their emerging technology paper online via email or by giving the instructor a printed copy at class.

**Deferred Final Examination:**

There is no exam for this course.

**Course Schedule:**

Seminar Leader	Required Readings (via Carleton Library online unless URL appears)	Additional Perspectives
<b>Nov 6 – Introduction – IT, Emerging IT, Innovation and Why Should I Care?</b>		
David Hudson	<p>Dedrick, Gurbaxani and Kraemer (2003) Information Technology and Economic Performance: A Critical Review of the Empirical Evidence, ACM Computing Surveys, (35)1, March 2003, pp. 1–28.</p> <p>Tam (1998) The Impact of Information Technology Investments on Firm Performance and Evaluation: Evidence from Newly Industrialized Economies, Information Systems Research, (9)1, 85-98.</p> <p><b><i>[Please read the Deloitte and Economist articles just to get a sense of what analysts write about technology, the CIO’s role, and business innovation – not for the details.]</i></b></p> <p>Deloitte (2014) Technology, Media, and Telecommunications Predictions 2014, <a href="http://www2.deloitte.com/content/dam/Deloitte/global/Documents/Technology-Media-Telecommunications/dttl_TMT_Predictions-2014-lc2.pdf">http://www2.deloitte.com/content/dam/Deloitte/global/Documents/Technology-Media-Telecommunications/dttl_TMT_Predictions-2014-lc2.pdf</a></p> <p>The Economist (2013) The strategic CIO - Risks, opportunities and outcomes, <a href="http://www.economistinsights.com/sites/default/files/EIU_EM_C_Strategic_CIO.pdf">http://www.economistinsights.com/sites/default/files/EIU_EM_C_Strategic_CIO.pdf</a></p>	<p>Ten Tech Terms 2014 <a href="http://news.yahoo.com/10-tech-terms-for-2014-142337446.html">http://news.yahoo.com/10-tech-terms-for-2014-142337446.html</a></p> <p>BusinessWeek (1975) The Office of the Future, <a href="http://www.businessweek.com/stories/1975-06-30/the-office-of-the-futurebusinessweek-business-news-stock-market-and-financial-advice">http://www.businessweek.com/stories/1975-06-30/the-office-of-the-futurebusinessweek-business-news-stock-market-and-financial-advice</a></p>

<b>Nov 13 – IT Consumerization</b>		
David Hudson	<p>Harris, J., Ives, B., and Junglas, I. (2012) IT consumerization: When gadgets turn into enterprise IT tools, MIS Quarterly Executive, 11(3), 99-112.</p> <p>Junglas, I., &amp; Harris, J. (2013). The promise of consumer technologies in emerging markets. Communications of the ACM, 56(5), 84–90. doi:10.1145/2447976.2447995</p> <p>Niehaves, B., Köffer, S., Ortbach, K., &amp; Katschewitz, S. (2012). Towards an IT Consumerization Theory – A Theory and Practice Review. In Working Paper #13, ERCIS - European Research Center for Information Systems (pp. 1–32). Münster, Germany.</p> <p>Weill, P., &amp; Ross, J. (2005). A matrixed approach to designing IT governance. MIT Sloan Management Review, (Winter), 26–34.</p> <p style="text-align: center;"><b><u>Proposal for Emerging Technology Paper Due (optional)</u></b></p>	<p>Economist Special Report: Beyond the PC <a href="http://www.economist.com/node/21531109">http://www.economist.com/node/21531109</a></p> <p>IT’s Arab Spring, Economist <a href="http://www.economist.com/node/21531112/print">http://www.economist.com/node/21531112/print</a></p> <p>Thomson, G. (2012) BYOD: Enabling the Chaos, <a href="http://dx.doi.org.proxy.library.carleton.ca/10.1016/S1353-4858(12)70013-2">http://dx.doi.org.proxy.library.carleton.ca/10.1016/S1353-4858(12)70013-2</a></p> <p>Apple (2012) Enhancing bedside manner with iPad, <a href="http://www.apple.com/ca/ipad/business/profiles/ottawa-hospital/">http://www.apple.com/ca/ipad/business/profiles/ottawa-hospital/</a></p>

<b>Nov 20 – Applied Social Media</b>		
Group 1	<p>Kaplan, A. M., &amp; Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. <i>Business Horizons</i>, 53(1), 59–68. doi:10.1016/j.bushor.2009.09.003</p> <p>Hanna, R., Rohm, A., and Crittenden, V. L. (2011) We are all connected: The power of the social media ecosystem, <i>Business Horizons</i>, 54, pp. 265-273.</p> <p>Culnan, McHugh and Zubillaga (2010) How large U.S. companies can use Twitter and other social media to gain business value, <i>MIS Quarterly Executive</i>, (9)4, pp 243-259.</p> <p>Christensen, C. (2011) Discourses of technology and liberation: State aid to Net activists in an era of “Twitter Revolutions”, <i>The Communication Review</i>, 14, pp. 233-253.</p> <p>Middleton, Middleton and Modafferi (2014) Real-Time Crisis Mapping of Natural Disasters Using Social Media, <i>IEEE Intelligent Systems</i>, (29)2, 9-17.</p>	<p>Social Media Statistics <a href="https://www.youtube.com/watch?v=0eUeL3n7fDs">https://www.youtube.com/watch?v=0eUeL3n7fDs</a></p> <p>Social Media Marketing <a href="https://www.youtube.com/watch?v=54VW9d009SY">https://www.youtube.com/watch?v=54VW9d009SY</a></p> <p>Social Media in revolutions <a href="http://www.youtube.com/watch?v=lnPR90dJ3Gk&amp;feature=related">www.youtube.com/watch?v=lnPR90dJ3Gk&amp;feature=related</a></p> <p>Wael Ghonim on 60 minutes <a href="http://www.cbsnews.com/news/wael-ghonim-and-egypts-new-age-revolution/">http://www.cbsnews.com/news/wael-ghonim-and-egypts-new-age-revolution/</a> ... and Giganet counterpoint <a href="http://www.youtube.com/watch?v=NxwX_SlScmw">http://www.youtube.com/watch?v=NxwX_SlScmw</a></p> <p>Crisis Net <a href="http://ushahidi.com/">http://ushahidi.com/</a></p>

<b>Nov 27 - The Cloud</b>		
Group 2	<p>Mell &amp; Grance (2010) The NIST Definition of Cloud Computing, <i>Communications of the ACM</i>, 53(6), p.50. <a href="http://csrc.nist.gov/publications/nistpubs/800-145/SP800-145.pdf">http://csrc.nist.gov/publications/nistpubs/800-145/SP800-145.pdf</a></p> <p>Armbrust et al. (2010) A view of cloud computing, <i>Communications of the ACM</i>, 53(4), p.50-58.</p> <p>Buyya, Yeo, Venugopal, Broberg &amp; Brandic (2009) Cloud computing and emerging IT platforms: Vision, hype, and reality for delivery computing as the 5th utility, <i>Future Generation Computer Systems</i>, 25, 599- 616.</p> <p>Brynjolfsson, Hofman &amp; Jordan (2010) Cloud computing and electricity: Beyond the utility model, <i>Communications of the ACM</i>, 53(5), p.32-34.</p> <p>Greengard, S. (2010) Cloud computing and developing nations, <i>Communications of the ACM</i>, 53(5), p.18-20.</p> <p>Ksherti (2010) Cloud Computing in Developing Economies: Drivers, Effects and Policy Measures, <i>PTC 2010</i>, 22 p. <a href="http://www.ptc.org/ptc10/program/images/papers/papers/paper_nir%20kshetri_b8.pdf">http://www.ptc.org/ptc10/program/images/papers/papers/paper_nir%20kshetri_b8.pdf</a></p> <p>Cleverley, M. (2009) How ICT Advances Might Help Developing Nations, <i>Communication of the ACM</i>, 52(9), p.30-32.</p> <p style="text-align: center;"><b><u>Draft of Emerging Technology Paper Due (optional)</u></b></p>	<p>Stephen Fry explains cloud <a href="https://www.youtube.com/watch?v=J9LK6EtxzM">https://www.youtube.com/watch?v=J9LK6EtxzM</a></p> <p>Why businesses use the cloud <a href="http://thoughtsoncloud.com/2013/10/five-reasons-why-businesses-are-using-cloud-an-ibm-study/">http://thoughtsoncloud.com/2013/10/five-reasons-why-businesses-are-using-cloud-an-ibm-study/</a></p> <p>7 Cloud Service Startups To Watch <a href="http://goo.gl/oo9EAL">http://goo.gl/oo9EAL</a></p> <p>Interest g=has peaked <a href="http://www.forbes.com/sites/reuvencohen/2012/05/24/interest-in-cloud-computing-has-peaked/">http://www.forbes.com/sites/reuvencohen/2012/05/24/interest-in-cloud-computing-has-peaked/</a></p> <p>Impact of Cloud Computing on Developing Economies <a href="http://www.youtube.com/watch?v=9BoXfCb2O6g">http://www.youtube.com/watch?v=9BoXfCb2O6g</a></p> <p>Cisco: <a href="http://www.cisco.com/web/about/ac79/docs/sp/Cloud-and-the-Digital-Divide.pdf">http://www.cisco.com/web/about/ac79/docs/sp/Cloud-and-the-Digital-Divide.pdf</a></p>

<b>Dec 4 – 3D Printing</b>		
Group 3	<p>Berman (2012) 3-D printing: The new industrial revolution, <i>Business Horizons</i>, (55)2, p 155-162.</p> <p>Mellis (2014) Do-It-Yourself Fabrication of Electronic Devices, <i>IEEE Pervasive Computing</i>, (13)3, p 22 – 29.</p> <p>Ratto &amp; Ree (2012) "Materializing information: 3D printing and social change" <i>First Monday [Online]</i>, Volume 17 Number 7 (27 June 2012)</p> <p>Hart, B. (2012) Will 3D printing change the world?, <a href="http://www.forbes.com/sites/gcaptain/2012/03/06/will-3d-printing-change-the-world/">http://www.forbes.com/sites/gcaptain/2012/03/06/will-3d-printing-change-the-world/</a></p> <p>Mironov et al (2003) Organ printing: computer-aided jet-based 3D tissue engineering, <i>TRENDS in Biotechnology</i>, (21)4, 157-161.</p> <p>Guillemot, Mironov &amp; Nakamura (2010) Bioprinting is coming of age, <i>International Conference on Bioprinting and Biofabrication, Biofabrication</i>, 2, 1-7.</p> <p>Anonymous. (2012) A third industrial revolution, <i>The Economist</i>, Apr 21: 3-4. <a href="http://www.economist.com/node/21552901">http://www.economist.com/node/21552901</a></p>	<p>PBS - Will 3D Printing Change the World? <a href="https://www.youtube.com/watch?v=X5AZzOw7FwA">https://www.youtube.com/watch?v=X5AZzOw7FwA</a></p> <p>Print me a phone <a href="http://www.economist.com/node/21559593">http://www.economist.com/node/21559593</a></p> <p>3D Printing: An "Industrial Revolution in the Digital Age, <a href="http://www.wired.com/business/2011/05/3d-printing-an-industrial-revolution-in-the-digital-age/">http://www.wired.com/business/2011/05/3d-printing-an-industrial-revolution-in-the-digital-age/</a></p> <p>3-D Guitar Printing: A Look into Fender Innovation <a href="http://www.youtube.com/watch?v=plAjKJTlxA&amp;feature=em-share_video_user">http://www.youtube.com/watch?v=plAjKJTlxA&amp;feature=em-share_video_user</a></p>

<b>Dec 11 – Augmented Reality/Wearables</b>		
Group 4	<p>Berryman, D. R. (2012) Augmented Reality: A review, <i>Medical Reference Services Quarterly</i>, 31(2), pp. 212–218</p> <p>van Krevelen &amp; Poelman (2010) A Survey of Augmented Reality Technologies, Applications and Limitations, <i>The International Journal of Virtual Reality</i>, 2010, 9(2):1-20 <a href="http://kjcomps.6te.net/upload/paper1%20.pdf">http://kjcomps.6te.net/upload/paper1%20.pdf</a></p> <p>Starner et al. (1997) Augmented reality through wearable computing." <i>Presence: Teleoperators and Virtual Environments</i>. (6)4, pp.386-398. <a href="http://www.cc.gatech.edu/fac/Thad.Starner/p/journal/augmented-reality-through-wearable-computing.pdf">http://www.cc.gatech.edu/fac/Thad.Starner/p/journal/augmented-reality-through-wearable-computing.pdf</a></p> <p>Eagle &amp; Pentland (2003) Wearables in the Workplace: Sensing Interactions at the Office, <i>Proceedings of the Seventh IEEE International Symposium on Wearable Computers (ISWC'03)</i> 2p.</p> <p>Pentland (1998) Wearable Intelligence, <i>Scientific American</i>, pp. 90-95. <a href="http://web.media.mit.edu/~sandy/wearable_intelligence.pdf">http://web.media.mit.edu/~sandy/wearable_intelligence.pdf</a></p> <p>Duval and Hashizume (2006) Questions to Improve Quality of Life with Wearables: Humans, Technology, and the World, 2006 International Conference on Hybrid Information Technology (ICHIT'06), 10 pp.</p>	<p>Ikea's Augmented Reality Catalog <a href="http://www.wired.com/gadgetlab/2012/07/ikea-s-augmented-reality-catalog-lets-you-peek-inside-the-malm/">http://www.wired.com/gadgetlab/2012/07/ikea-s-augmented-reality-catalog-lets-you-peek-inside-the-malm/</a></p> <p>Pattie Maes: Unveiling game-changing wearable tech <a href="https://www.youtube.com/watch?v=nZ-VjUKAsao">https://www.youtube.com/watch?v=nZ-VjUKAsao</a></p> <p>Google Glass review – Engadget <a href="https://www.youtube.com/watch?v=j8lScHO2mM0">https://www.youtube.com/watch?v=j8lScHO2mM0</a></p> <p>Roggen, Perez, Fukumoto, and van Laerhoven (2014) ISWC 2013—Wearables Are Here to Stay, <i>IEEE Pervasive Computing</i>, (13)1, pp 14-18.</p>

**Dec 14 at 6 pm – Final Emerging Technology Paper Due**

## **Policy on Mobile Devices**

The use of mobile devices IS NOT PERMITTED in this class. It is disruptive to the instructor and class members. If you carry such a device to class, please make sure it is turned off. If an emergency situation requires you to keep it turned on, please discuss this with your instructor prior to class.

## **Group Work**

The Sprott School of Business encourages group assignments in the school for several reasons. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, followership and other group skills. Group assignments are also good for learning integrative skills for putting together a complex task. Your instructor may assign one or more group tasks/assignments/projects in this course.

*Before embarking on a specific problem as a group, it is your responsibility to ensure that the problem is meant to be a group assignment and not an individual one.*

## **Person with Disabilities**

Students with disabilities requiring academic accommodations in this course are encouraged to contact a co-ordinator at the Paul Menton Centre for Students with Disabilities to complete the necessary letters of accommodation. After registering with the PMC, make an appointment to meet and discuss your needs with me at least two weeks prior to the first in-class test or ITV midterm exam. This is necessary in order to ensure sufficient time to make the necessary arrangements. Please refer to <http://www.carleton.ca/pmc/> for all PMC information.

## **Religious Observance**

Students requesting academic accommodation on the basis of religious observance should make a formal, written request to their instructors for alternate dates and/or means of satisfying academic requirements. Such requests should be made during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist, but no later than two weeks before the compulsory academic event. Accommodation is to be worked out directly and on an individual basis between the student and the instructor(s) involved. Instructors will make accommodations in a way that avoids academic disadvantage to the student.

Students or instructors who have questions or want to confirm accommodation eligibility of a religious event or practice may refer to the Equity Services website for a list of holy days and Carleton's Academic Accommodation policies, or may contact an Equity Services Advisor in the Equity Services Department for assistance.

## **Pregnancy**

Pregnant students requiring academic accommodations are encouraged to contact an Equity Advisor in Equity Services to complete a *letter of accommodation*. The student must then make an appointment to discuss her needs with the instructor at least two weeks prior to the first academic event in which it is anticipated the accommodation will be required.

### **Academic Integrity**

Violations of academic integrity are a serious academic offence. Violations of academic integrity – presenting another’s ideas, arguments, words or images as your own, using unauthorized material, misrepresentation, fabricating or misrepresenting research data, unauthorized co-operation or collaboration or completing work for another student – weaken the quality of the degree and will not be tolerated. Penalties may include expulsion; suspension from all studies at Carleton; suspension from full-time studies; a refusal of permission to continue or to register in a specific degree program; academic probation; and a grade of Failure in the course, amongst others. Students are expected to familiarize themselves with and follow the Carleton University Student Academic Integrity Policy which is available, along with resources for compliance at <http://www2.carleton.ca/sasc/advisingcentre/academic-integrity/>.