

GEOG 3414B – Digital Technology, Society & the Environment

Course Syllabus Winter 2020

1. Course Information

- Classroom Location: PAB 36
Lectures: Wednesday 11:30-1:30
Thursday 11:30 – 12:30
- Contact Information:
Instructor: Dr Agnieszka Leszczynski
Office: SSC 2425
Office Hours: Thursdays 1:30 – 3:30

Course email: geog3414@uwo.ca

Teaching Assistant:
TBA
Office Hour: TBA, SSC 2316

2. Calendar Description

- Course Description

This course engages with digital technologies as social and spatial phenomena. Through an exploration of themes including the cloud, internet infrastructures, smart cities, digital platforms, and the gig/sharing economy, the course identifies the environmental and social implications of pervasive digitality while critically navigating through utopian versus dystopian discourses of technology.

- 3 lecture hours per week, 0.5 course
- Prerequisite(s): Third or fourth year standing at the University.
- Senate Regulations

Senate Regulations state, “unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you will be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.”

3. Readings

There will be a selection of readings to parallel weekly lecture topics drawn from a range of journal articles, online content (newspaper articles, etc.), and books and book chapters. Where possible, these will be made available electronically via the OWL site for this course and put on reserve in the library.

4. Course Objectives

The objectives of the course are to:

- Examine the myriad societal and environmental implications of pervasive digital technologies, the digital economy, and everyday digital practices, and to trace their geographies.
- Introduce and navigate through the range of narratives and discourses which frame digital technologies as either socially beneficial or deleterious
- To critically evaluate the merits of competing claims about technologies and their potential social and environmental consequences

5. Learning Outcomes

Students who complete Geography 3414 will be able to:

- Understand digital technologies as phenomena that are socially and spatially produced.
- Identify the consequences of digital assemblages along social, ecological, and economic axes.
- Critically navigate through false binaries of utopian versus dystopian discourses of digital technologies.
- Identify the global and local geographies of digital technology production, circulation, financialization, and impacts.

6. Course Schedule

Subject to change.

Week 1 | Jan 8 & 9 | Course Overview | Welcome to the digital

- Overview of course structure, content, format, and expectations.
- Introduction to key concepts and terms in the course, and a framing of course themes and topics within the context of the pervasiveness of digital technologies across the spaces and practices of everyday life.

Week 2 | Jan 15 & 16 | The cloud

- A geographical grounding of the a-spatial metaphor of 'the cloud' in material infrastructures and environmental considerations.

Readings:

- Hu T-H (2016) "Introduction", in A Prehistory of The Cloud. Cambridge: MIT Press. pp ix-xxix.
- Blum A (2012) Chapter 7, "Where data sleeps", in Tubes: A Journey to the Center of the Internet. New York: Ecco. pp 227-262.
- Hogan M (2018) Big data ecologies. *Ephemera: Theory & Politics in Organization*. 18(3): 631-657.

Podcast:

- Henn S (2014) Searching The Planet To Find Power For The Cloud. *All Tech Considered*, 21 April.
<https://www.npr.org/sections/alltechconsidered/2014/04/21/305666363/searching-the-planet-to-find-power-for-the-cloud>

Week 3 | Jan 22 & 23 | Cryptocurrency

- Introduction to and critical engagement with cryptocurrencies, including a consideration of their dominant discursive framings, energy requirements, and geopolitical implications.

Readings:

- Appelbaum B (2018) Is Bitcoin a Waste of Electricity, or Something Worse? *The New York Times*, 28 February.
<https://www.nytimes.com/2018/02/28/business/economy/bitcoin-electricity-productivity.html>
- Lally N, Kay K and Thatcher J (2019) Computational parasites and hydropower: A political ecology of Bitcoin mining on the Columbia River. *Environment and Planning E: Nature and Space*, doi: [10.1177/2514848619867608](https://doi.org/10.1177/2514848619867608)
- Bowles N (2018) Making a Crypto Utopia in Puerto Rico. *The New York Times*, 02 February. <https://www.nytimes.com/2018/02/02/technology/cryptocurrency-puerto-rico.html>
- Crandall J (2019) Blockchains and the "Chains of Empire": Contextualizing Blockchain, Cryptocurrency, and Neoliberalism in Puerto Rico. *Design and Culture* 11: 279-300.

Podcast:

- Vanek Smith S and Garcia C (2019) Bitcoin's Energy Bill. *The Indicator from Planet Money*, July 12th. <https://www.npr.org/2019/07/12/741216855/bitcoins-energy-bill>

Week 4 | Jan 29 & 30 | Bikeshares and e-scooters

- This week the focus shifts to digital platforms and a 2-week arc on mobilities, beginning with a focus on 'micromobilities' or 'short-hop' transportation modes, namely bikesharing and e-scooters.

Readings:

- Stehlin J (2019) Bicycle Sharing Systems as Already-Splintered Infrastructure. Chapter 6, in Cyclescapes of the Unequal City: Bicycle Infrastructure and Uneven Development. pp. 141-171.
- McKenzie G (2019) Spatiotemporal comparative analysis of scooter-share and bike-share usage patterns in Washington, D.C. *Journal of Transport Geography* 78: 19-28.
- Rosalsky G (2019) Will Scootermania End With A Crash? *Planet Money Newsletter*, 14 May. <https://www.npr.org/sections/money/2019/05/14/723003882/will-scootermania-end-with-a-crash>

Podcast:

- Domonoske C (2019) Who Charges All Those Electric Scooters? Follow A Nocturnal "Juicer". *NPR*, 13 March. <https://www.npr.org/2019/03/13/701130673/who-charges-all-those-electric-scooters-follow-a-nocturnal-juicer>

Week 5 | Feb 5 & 6 | Ridehailing

- Continuing with the mobilities theme, with platform enterprises begins with ridehailing (Uber, Lyft, and competitors), with a consideration of what this means for cities, public transportation infrastructures, and automobile emissions.

Readings:

- Graehler M Jr., Mucci RA and Erhardt GD (2018) Understanding the Recent Transit Ridership Decline in Major US Cities: Service Cuts or 2 Emerging Modes? *98th Annual Meeting of the Transportation Research Board*. <https://usa.streetsblog.org/wp-content/uploads/sites/5/2019/01/19-04931-Transit-Trends.pdf>
- Rodier C (2018) The Effects of Ride Hailing Services on Travel and Associated Greenhouse Gas Emissions. A White Paper from the National Centre for Sustainable Transportation. Download available at: <https://escholarship.org/uc/item/2rv570tt>

- Brown A (2019) Prevalence and Mechanisms of Discrimination: Evidence from the Ride-Hail and Taxi Industries. *Journal of Planning Education and Research*. DOI: [10.1177/0739456X19871687](https://doi.org/10.1177/0739456X19871687).

Podcast:

- Young N (2018) Ride-sharing was supposed to make traffic better. It's making it worse. *Spark*, 07 September. <https://www.cbc.ca/radio/spark/spark-404-1.4811760/ride-sharing-was-supposed-to-make-traffic-better-it-s-making-it-worse-1.4811762>

Week 6 | Feb 12 & 13 | MIDTERM

READING WEEK | Feb 19 & 20 | NO CLASS

Week 7 | Feb 26 & 27 | Gig work

- A shift in focus from how digital platforms mediate how we move around cities to how platforms mediate how the things we consume move through and across cities, with an attention to both environmental and social considerations, including labour.
- ***Project proposals due in hardcopy at the start of class on Thursday Feb 27. Late penalty: 20% for the first 24 hours, 10% for each 24 hour period thereafter. No proposals will be accepted after 4 pm on Friday February 28th. Late proposals must be submitted to the assignment drop-box outside of the Department of Geography main office (SSC 2322). Assignments are retrieved from the drop-box at 4 pm so make sure you get yours in by 3:59 pm if submitting late.***

Readings:

- Ticona J, Mateescu A and Rosenblat A (2018) Beyond Disruption: How Tech Shapes Labor Across Domestic Work & Ridehailing. *Data & Society*. https://datasociety.net/wp-content/uploads/2018/06/Data_Society_Beyond_Disruption_FINAL.pdf

Podcast:

- Swisher K with Greenhouse S (2019). Why workers need to be part of the conversation about UBI and artificial intelligence. *Recode Decode*, 06 September. Listen at (scroll down): <https://www.vox.com/recode/2019/9/6/20853054/steve-greenhouse-ubi-artificial-intelligence-andrew-yang-labor-kara-swisher-recode-decode-podcast>

Week 8 | Mar 4 & 5 | Delivery and the on-demand economy

- A shift in focus from how digital platforms mediate how we move around cities to how platforms mediate how the things we consume move through and across cities, with an attention to both environmental and social considerations, including labour.

Readings:

- Haag M and Hu W (2019) 1.5 Million Packages a Day: The Internet Brings Chaos to N.Y. Street. *The New York Times*, 27 October.
<https://www.nytimes.com/2019/10/27/nyregion/nyc-amazon-delivery.html>
- Heard B, Bandekar M, Vassar B and Miller SA (2019) Comparison of life cycle environmental impacts from meal kits and grocery store meals. *Resources, Conservation and Recycling* 147: 189-200.
- Goodchild A and Toy J (2018) Delivery by drone: An evaluation of unmanned aerial vehicle technology in reducing CO₂ emissions in the delivery service industry. *Transportation Research Part D: Transport and Environment* 61(Part A): 58-67.

Podcast:

- Kapsis J and Turner M (2018) Episode 7: Delivery City: Will food delivery apps kill your favourite neighbourhood restaurant? *Technopolis*.
<https://www.citylab.com/solutions/2019/02/podcast-technopolis/583096/>

Week 9 | Mar 11 & 12 | Short-term rentals

- An engagement with what short-term accommodation platforms such as Airbnb mean for urban housing, housing affordability, and urban governance.

Readings:

- Wachsmuth D and Weisler A (2018) Airbnb and the rent gap: Gentrification through the sharing economy. *Environment and Planning A: Economy and Space* 50(6): 1147-1170.
- Cocola Gant A (2016) Holiday Rentals: The New Gentrification Battlefield. *Sociological Research Online* 21(3): 1-9.
- Ferreri M and Sanyal R (2018) Platform economies and urban planning: Airbnb and regulated deregulation in London. *Urban Studies* 55(15): 3353-3368.

Podcast:

- Wendland T and Goldmark A (2019) Episode 897: New Orleans Vs. Airbnb. *Planet Money*, 28 February.

<https://www.npr.org/sections/money/2019/02/28/698763891/episode-897-new-orleans-vs-airbnb>

Week 10 | Mar 18 & 19 | The smart home and the internet of things (IoT)

- Scaling from the city to the home, an exploration of the implications of the incursion of connected – ‘smart’ – technologies into private domestic spaces. A consideration of what IoT in the home means for privacy, intimacy, domestic energy expenditure, and gender relations.

Readings:

- Morley J, Widdicks K and Hazas M (2018) Digitalisation, energy and data demand: The impact of Internet traffic on overall and peak electricity consumption. *Energy Research & Social Science* 38: 128-137.
- Herrero ST, Nichols L and Strengers Y (2018) Smart home technologies in everyday life: do they address key energy challenges in households? *Current Opinion in Environmental Sustainability* 31: 65-70.
- Strengers Y and Nicholls L (2018) Aesthetic pleasures and gendered tech-work in the 21st-century smart home. *Media International Australia* 166(1): 70-80.
- Bowles N (2018) Thermostats, Locks and Lights: Digital Tools of Domestic Abuse. *The New York Times*, 23 June. <https://www.nytimes.com/2018/06/23/technology/smart-home-devices-domestic-abuse.html>

Podcast:

- Wood M (2019) Your smart speaker is always listening. *Marketplace Tech*, 12 April. <https://www.marketplace.org/2019/04/12/your-smart-speaker-is-always-listening/>

Week 11 | Mar 25 & 26 | Algorithms and AI

- Exploration of how algorithms and AI play a structural role in underwriting the exclusion of subjects and spaces across heterodox geographies and intersectional positionalities.

Readings:

- Crawford K and Joler V (2018) Anatomy of an AI System. <https://anatomyof.ai/>
- Schwab K (2018) A Google intern built the AI behind these shockingly good fake images. *Fast Company*, 02 October. <https://www.fastcompany.com/90244767/see-the-shockingly-realistic-images-made-by-googles-new-ai>

- Benjamin R (2019) Engineered Inequality: Are Robots Racist? In Race After Technology: Abolitionist Tools for the New Jim Code. Cambridge, UK and Medford, MA: Polity Press. pp 49-76.

Podcast:

- Sydell L (2018) The Push For A Gender-Neutral Siri. *All Things Considered*, 09 July. <https://www.npr.org/2018/07/09/627266501/the-push-for-a-gender-neutral-siri>

Week 12 | Apr 1 & 2 | Course wrap up and final exam review

- Exploration of how digital technologies play a structural role in underwriting the exclusion of subjects and spaces across heterodox geographies and intersectional positionalities.
- **Term project submissions due electronically by 4:00 pm on Thursday, April 2nd. Late penalty: 20% for the first 24 hours, and 10% for each 24 hour period thereafter up to 72 hours beyond the submission deadline. No assignments will be accepted more than 72 hours past the submission deadline.**

7. Evaluation

| Evaluation Components | Percentage of Course Grade | Details |
|--|----------------------------|--|
| In-class participation | 10% | Participation consists of written questions submitted by each student at the end of each Wednesday’s lecture for 10 themed lectures, starting in week 2 (The cloud) . These questions may be about the lecture content or the readings for that week. The professor will answer a selection of these at the start of the next class (Thursday). Students must submit a question at the end of 10 Wednesday lectures (x 10) to achieve the full participation grade. |
| Midterm exam | 20% | Week 6 (week before Reading Week) |
| Final exam | 30% | Date TBA Final Exam Period |
| Term assignment (audio-visual research presentation) | 25% | For your term assignment, you will research, create, audio-narrate and record, and submit a 10 minute audio-video slide presentation on a course-relevant topic of your choice. This will be submitted digitally. |
| Project proposal | 5% | Feb 27 th @ <i>start of class</i> Details TBA |

| Evaluation Components | Percentage of Course Grade | Details |
|------------------------|----------------------------|--|
| Annotated bibliography | 10% | An annotated bibliography of the references used when researching your topic and putting together your presentation. |

8. Requesting Academic Consideration

Students who experience an extenuating circumstance (illness, injury, or other extenuating circumstance) sufficiently significant to temporarily render them unable to meet academic requirements may submit a request for academic consideration through the following routes:

- (i) Submitting a Self-Reported Absence form provided that the conditions for submission are met;
- (ii) For medical absences, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner in order to be eligible for Academic Consideration; or
- (iii) For non-medical absences, submitting appropriate documentation (e.g., obituary, police report, accident report, court order, etc.) to Academic Counselling in their Faculty of registration in order to be eligible for academic consideration. Students are encouraged to contact their Academic Counselling unit to clarify what documentation is appropriate.

Students seeking academic consideration:

- are advised to consider carefully the implications of postponing tests or midterm exams or delaying handing in work;
- are encouraged to make appropriate decisions based on their specific circumstances, recognizing that minor ailments (upset stomach) or upsets (argument with a friend) are not normally an appropriate basis for a self-reported absence;
- **must communicate with their instructors no later than 24 hours** after the end of the period covered by either the self-reported absence or SMC, or immediately upon their return following a documented absence.

Academic consideration is not normally intended for the following circumstances:

- **Students who require academic accommodation based on an ongoing physical or mental illness (recurring or chronic) or an existing disability.** Students with an ongoing physical illness or mental disorder (recurring or chronic) or an existing disability are responsible, in consultation with their doctors or other health professionals, to determine if they are capable of pursuing their studies and, if so, with what accommodations. Students are expected to seek and arrange reasonable accommodations with Student Accessibility Services (SAS) as soon as possible in accordance with the Policy on Academic Accommodation for Students with Disability. Students with pre-existing accessibility plans arranged

through SAS may not need to provide additional documentation when seeking academic consideration where such request for consideration relates to their disability and where their accessibility plans allow for coursework deferral or deadline extensions.

- **Students who experience high levels of stress related to academic performance** (including completing assignments, taking part in presentations, or writing tests or examinations). Students with academic or exam stress should access supports through Student Health and Wellness and Learning Skills Services in order to deal with this stress in a proactive and constructive manner.

Grades will not be adjusted on the basis of need. It is important to monitor your performance in the course. Remember: *You* are responsible for your grades in this course.

9. Make-up Examinations

No make-up examination will be offered for the midterm exam. In the event of a missed midterm – whether due to medical or non-medical reasons with documentation, or the use of a self-reported absence – the final exam will be re-weighted to be worth 50% of the course grade.

Make-ups for the final exam will be granted with approved documentation ***only***. All documentation for missed exams must be provided the Academic Counselling Office and Instructor within 48 hours of the scheduled exam. Otherwise, the instructor will assign a grade of zero. The format and content of make-ups may differ substantially from the scheduled test or examination.

10. Use of Electronic Devices

There is a strict **no phones** policy in class. All mobile phones must be turned to silent mode and stored out of sight (in bags, purses, pockets, etc.).

No electronic devices will be allowed during tests and examinations.

11. Lecture Slides & Recordings

No audio or video recording of lectures is permitted without the explicit written permission of the instructor. If you require an accessibility accommodation in this matter, please contact the instructor.

Lectures and course materials, including power point presentations, outlines, and similar materials, are protected by copyright (copyright of the instructor). You may not record lectures*, reproduce (or allow others to reproduce), post or distribute lecture notes, wiki material, and other course materials publicly and/or for commercial purposes without the instructor's written consent.

**with the exception of individual cases that fall within the remit of the University policy on academic accommodations and accessibility; in this instance, permission to record must be secured from the instructor in advance.*

12. Academic Offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence.

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

13. Western's Commitment to Accessibility

The Department of Geography strives at all times to provide accessibility to all faculty, staff, students and visitors in a way that respects the dignity and independence of people with differential abilities.

Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 519-661-2147 for any specific question regarding an accommodation. Information regarding accommodation of exams is available on the Registrar's website.

More information about "Accessibility at Western" is available.

14. Medical Issues

The University recognizes that a student's ability to meet his/her academic responsibilities may, on occasion, be impaired by medical illness. The Student Services website provides greater detail about the University's policy on medical accommodation. This site provides links the necessary forms. In the event of illness, you should contact Academic Counselling as soon as possible. The Academic Counsellors will determine, in consultation with the student, whether or not accommodation should be requested. They will subsequently contact the instructors in the relevant courses about the accommodation. Once the instructor has made a decision about whether to grant an accommodation, the student should contact his/her instructors to determine a new due date for tests, assignments, and exams.

Students must see the Academic Counsellor and submit all required documentation in order to be approved for certain accommodation.

15. Mental Health

If you or someone you know is experiencing distress, there are several resources here at Western to assist you. Please visit Western's Health and Wellness website for more information on mental health resources.

16. Support Services

Student Support Services

Student Development Services

17. Important Dates Winter 2020

January 6: Classes resume

January 10: Last day to add a second term half course

February 17: Family Day – Department Office Closed

February 18-23: Spring Reading Week (No classes; Department Office open)

March 7: Last day to drop a second term half course without penalty

April 3: Classes end

April 4 and 5: Study days

April 6-26: Final Examination Period