GEG6134

GEOGRAPHY, TECHNOLOGY & SOCIETY

Module Handbook 2022/23

KEY INFORMATION

MODULE RATING	15 Credits
CONVENOR	Dr Kerry Holden, k.holden@qmul.ac.uk
	102 Geography Building
ADVICE AND FEEDBACK HOURS	Monday 4-5pm, Tuesday 2-3pm

MODULE DELIVERY AND ASSESSMENT

LECTURE	Monday 12.30-1.30pm Engineering building 3.24
SEMINAR 1	Monday 2.00-3.00pm Bancroft 3.23
SEMINAR 2	Monday 3.00-4.00pm Bancroft 3.23
ASSESSMENT	Throughout this module you will be assessed on two pieces of coursework described below:

1. Weekly diary entry (30%)
2. Case study essay (70%)

ASSESSMENT DETAILS

COURSEWORK 1

WEEKLY DIARY ENTRY
30% of final grade

DEADLINES:
Final deadline for submission of ALL entries 9th December 2022

WORD LIMIT:
300 words maximum per entry

1,500 words in total

You are required to read regularly and participate in weekly seminars. The diary entries offer you an opportunity to articulate your own thoughts and reflections on the readings and the seminar discussion. The diary entry will prepare you for completing coursework 2, the case study essay. Please see guidance note available via QM Plus.

The assessment is based on you submitting 5 entries from the across the module. Each entry should be no more than 300 words in length, totalling 1,500 words.

Ideally, you will write a couple of hundreds words each week and submit what you think are your five best entries for assessment. These can be on topics that you have enjoyed the most and readings that you've understood the best.

The diary entry assessment will start in week 3 and end in week 11. Out of 8 weeks of teaching you will submit a diary entry for 5 weeks of your choice.

The final deadline for submission of all diary entries, compiled **in one file which each entry dated and titled accordingly** is **Friday 9th December 2022**

COURSEWORK 2

CASE STUDY ESSAY
70% of final grade

DEADLINE:
5th January 2023

WORD LIMIT:
Minimum 2,000 - Maximum 2,500

The final piece of coursework requires you to develop a case study essay that explores technology and society from a geographical perspective. You will use the theoretical knowledge you have learned throughout the module alongside your geographical research skills to identify and investigate a specific example of how technology, society and space interact and interrelate.

Deadlines	COURSEWORK 1 (DIARIES)	**9th December 2022**

COURSEWORK 2 (CASE STUDY)	5th January 2023

Full Coursework Submission Guidelines, details of Penalties for Late Submission and information on how to make an application to the School's Extenuating Circumstances Panel may be found in the Undergraduate Information Zone on QM Plus

MODULE AIMS

The aim of this module is to equip you with the critical skills to rethink relations between geography, technology and society. You will learn the key critiques and theories through regular reading, lectures and seminar discussions.

There are two pieces of coursework to complete. The first involves a weekly diary entry that demonstrates your understanding of the key texts and participation in the seminar discussions. The diary exercise will prepare you to complete the second assessment, a case study essay (2,000-2,500 words) that is a geographical study of technology and society based on your own independent research. The coursework is designed to be integrative, in that you can use the diary entries to help you develop the theoretical approach and analysis of your case study essay.

The module will progress through a series of weekly lectures and seminars. The module builds on your prior learning in the social construction of knowledge and technology, for example taught on the following modules: GEG5103 Geographical Research in Practice, GEG5135 Health, Space and Justice, GEG6130 Geopolitics post 9/11: War, Security, Economy, GEG6145 Historical Geographies of Medicine: From Imperial Hygiene to Global Health.

The module aims to:
1) Equip you with the skills to interrogate and rethink our relationship to technology
2) Introduce you to key theoretical perspectives in understanding technology and society
3) Help you develop a critical understanding of key approaches, concepts and methods in studying technology and society
4) Support your understanding of how race, gender, embodiment and power interact with technologies

LEARNING OUTCOMES

Knowledge
This module aims to develop your:
- critical and evaluative skills in examining complex relationships between technology and society
- ability to synthesise perspectives, approaches and theories in developing original insights and applying analysis
- geographical understanding of technology in and through place, space and society

Skills
This module will help you to improve your:
- research management skills by sourcing, retrieving, organising and assessing academic literature and other sources of information
- communication skills through critical writing exercises and participation in seminar discussions
- reflexive and critical thinking skills by interpreting and analysing a range of examples and materials

LEARNING STRATEGIES

The module is built around a core set of lectures and student-led seminar discussions.

Detailed outline:
- *lectures* will provide you with an outline of the topic content, including key approaches and theories, as well as guidance on independent learning and module assessments
- *1-hour seminar* will take place weekly and be led by students leading on particular readings from weeks 3-11
- *Independent learning (5+ hours per week)* to prepare for the seminars by completing the two key readings in preparation for the lecture and seminar.

ATTENDANCE

Attendance at the seminars will be monitored. Try to remember that low and sporadic attendance and engagement affects everyone, slowing down the learning process and the capacity to develop critical insight. If for some reason you are unable to attend, then please contact the course convenor in advance.

CONTACTING YOU

You will receive any new notifications via your QMUL email, so **please keep your eye on your university email account.**

FURTHER HELP AND ADVICE

If you require further help or advice, please contact the course convenor and arrange a meeting during their advice and feedback hours.

KEY READING

There is no one textbook that is required reading for this module. However, a carefully crafted reading list is available via Talis and an extended reading list has been compiled and is available via QM PLUS.

LECTURE & SEMINAR OUTLINE

WEEK 1
26TH SEPTEMBER

What is technology?

We begin the module by asking a fairly straightforward question, what is technology? Throughout this module we'll keep coming back to this question. We will take apart the stories we tell ourselves about technology, especially its assumed neutrality and impact on society, and challenge the assumptions we make about the relationship between technology and society.

KEY READINGS:

Nye D (2007) *Technology Matters, Questions to Live By*, Cambridge MA: MIT Press, chapter 1, Can we define technology?

Marx L (2010) Technology: the emergence of a hazardous concept, *Technology and Culture* 51 (3): 561-577

WEEK 2
3RD OCTOBER

The social construction of technology

How do we study technology? This week we will explore how the relationship between society and technology has been studied in the social sciences. This will introduce us to determinism and social constructionism, and how scholars have cut the polemical debate to present new critiques in the social construction of technology.

KEY READINGS:

Hughes T (2008/1994) Technological momentum, in Johnson D and Wetmore J (eds.) *Technology and Society: Building our Sociotechnical Future*, Cambridge MA: MIT Press 141-150

Latour B (2008/1992) Where are the missing masses? The sociology of a few mundane artifacts, in Johnson D and Wetmore J (eds.) *Technology and Society: Building our Sociotechnical Future*, Cambridge MA: MIT Press 98-115

WEEK 3
10TH OCTOBER

STUDENT LED SEMINARS FROM WEEKS 3 TO 11
We'll divide up the next eight weeks between the seminar group, with students taking the lead in one of the seminars to present readings and examples.

CRITICAL APPROACHES

In the next three seminars, we engage with critical approaches to technology and society that explore how technologies are made and the impacts they have

1. **Feminism and technology**

All technologies are gendered: we will explore how technologies have norms and values about gender built into them and how they structure and shape gender in different societal contexts.

KEY READINGS

Haraway D (1991) A cyborg manifesto: science, technology and socialist feminism in the late twentieth century, in *Simians, Cyborgs and Women: The Reinvention of Nature*, London: Routledge 149-181

D'Ignazio C and Klein L (2020) *Data Feminism*, Cambridge MA: MIT Press https://data-feminism.mitpress.mit.edu/ Read the short introduction and scroll down to read one of the examples of feminism principles in data science

WEEK 4
17TH OCTOBER

2. **Race and technology**

We will explore how race is configured in the making of technologies and how technologies naturalise and reinforce racism in society. We will be introduced to Ruha Benjamin's contention that digital technologies are in fact surveillance and carceral technologies that continue to subjugate and exploit people of colour.

KEY READINGS

Benjamin R (2016) Catching our breath: critical race STS and the carceral imagination, Engaging Science, Technology and Society 2: 145-156

Benjamin R (2019) Introduction in Race after Technology: Abolitionist Tools for the New Jim Code, London: Polity Press 1-32

WEEK 5
24TH OCTOBER

3. **Posthumanism**

This week we turn to a philosophical question about what it means to be human. We will learn how technologies radically reconfigure our ideas about what it means to be a human in the 21st Century. The posthuman can be thought of as the cyborg, the robot, the zombie, but posthumanism carries another meaning developed in geography about the ethics of living in complex interconnected environments. We will explore both trajectories of the posthuman.

Key readings

Hayles N K (1999) Towards embodied virtuality in *How we Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, Chicago IL: University of Chicago Press 1-24

Braidotti R and Hlavajova (2018) *Posthuman Glossary*, London: Bloomsbury Academic. Read at least **two entries** from the following list: AI (artificial intelligence), Anthropocene, the computational turn, critical posthumanism, multispecies, multiverse, planetary, posthumanism collection of entries. Feel free to browse other entries that catch your eye

WEEK 6
31ST OCTOBER

INFRASTRUCTURES

There are many technologies to engage with and in the next three seminars we will examine infrastructures, often considered technical feats of engineering and design. Infrastructures are now being examined as technologies that make societal durable, in that they lend society form, structure and materiality.

1. Technopolitics

How do infrastructures create political problems and solutions? The concept of technopolitics was devised to capture how technologies carry political goals. We will read a classic text by Winner and consider how the political aims of the Apartheid regime in South Africa were hardwired in water meters.

KEY READINGS

Winner L (1980) Do artifacts have politics? *Daedalus* 109 (1) 121-136

Von Schnitzler (2008) Citizenship Prepaid: Water, calculability, and technopolitics in South Africa, *Journal of Southern African Studies* 34 (4): 899-917

WEEK 8
14TH NOVEMBER

2. Socio-technical imaginaries

The related concept of socio-technical imaginaries captures the kinds of futures and possibilities technologies imagine and promise. We will look at two examples, one explores the imaginaries of roads in Peru and the other, the imaginaries of childhood development in the form of laptops.

KEY READINGS

Jasanoff S (2015) Future imperfect: science, technology and the imaginations of modernity in *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power*, Chicago IL: University of Chicago Press, 1-33

And either

Ames M (2019) Introduction in *The Charisma Machine: The Life, Death, and Legacy of One Laptop per Child*, Cambridge MA: MIT Press

Or

Harvey P and Knox H (2015) Historical Futures in *Roads: Towards an Anthropology of Infrastructure and Expertise*, Ithaca NY, 21-51

WEEK 9
21ST NOVEMBER

3. Invisible infrastructures

Infrastructures are only visible when they fail, so said Susan Leigh Starr, but she said this back in the 1990s, before the expansion of digital technologies in the building of urban strata. We are integrated into infrastructures that we can neither see nor understand, but which shape our lives.

KEY READINGS

Simone AM (2004) People as infrastructure: intersecting fragments in Johannesburg, in Public Culture 16 (3): 407-429

Easterling K (2016) Introduction in *Extrastatecraft: The Power of Infrastructural Space*, London: Verso 9-20

WEEK 10 28ᵀᴴ NOVEMBER	**DIGITAL FUTURES** 1. Digital selves	Infrastructures lead us towards futurity. The imagined futures conjured by technologies depend on conditions of the present in terms of governing, resources and producing technologies. We'll start by exploring the self and data science. We return to questions of posthumanism in asking what happens to free will and reason if we are calculable subjects in the realm of algorithms and surveillance. KEY READINGS Nopper T (2019) Digital character in the "scored society": FICO, social networks and the competing measurements of creditworthiness in Benjamin R (ed) *Captivating Technology: Race, Carceral Technoscience, and the Liberatory Imagination in Everyday Life*, Durham NC: Duke University Press 170-187 Lupton D (2016) The diverse domains of quantified self-tracking modes and dataveillance, *Economy and Society* 45 (1): 101-122
WEEK 11 5ᵀᴴ DECEMBER	2. Technologies of preparedness	In this seminar we will explore how future environments are being imagined through data sensing and the kinds of management, policymaking and governance they call into being to mitigate risks and hazards. KEY READING Lakoff A and Collier S (2010) Infrastructure and event: the political technology of preparedness in Braun B and Whatmore S (eds) *Political Matter: Technoscience, Democracy and Public Life*, Minneapolis MN: University of Minnesota Press, 243-266 Gabrys J (2014) Programming environments: environmentality and citizen sensing in the smart city, *Environment and Planning D: Society and Space* 32 (1) 30-48
WEEK 12 12ᵀᴴ DECEMBER	3. Planetary futures	Digital extension on the surface of the planet relies on pushing people deeper into the earth's crust to extract minerals and metals, and expanding global production chains. While digitalisation promises techno-utopias, to produce digital technologies and infrastructures relies on racial capital; the continued extraction, exploitation and displacement of vulnerable environments and peoples. We'll end the module thinking through the materiality and racialised capitalism of digital technologies and ask, can we do technology better? KEY READINGS Laing Ebbensgaard C, Holden K and Yusoff K (2022) Planetary portals in the upside down world in Harriss H and House N (eds) *Working at the Intersection: Architecture after the Anthropocene*, RIBA Publishing Escobar A (2020) Introduction: another possible is possible in *Pluriversal Politics: The Real and the Possible*, Durham NC: Duke University Press