

# HPSC0013 Science in Popular Culture Course Syllabus

2022-2023 session | Dr Michel Wahome | [m.wahome@ucl.ac.uk](mailto:m.wahome@ucl.ac.uk)

## Course Information

Science and technology permeate popular culture. From Attenborough's documentaries, sci-fi films like Avatar, and TV series like Black Mirror, science and popular culture are deeply intertwined. In this module we explore science in popular culture using theories from sociology, cultural studies, media studies, and post-colonial studies. Science and popular culture are related in ways that you might not think! I will suggest that they are actually co-constructed and mutually shaping.

As with any module, your active participation in the group and taking responsibility for your own learning are crucial. Together, we will learn about the politics of science and of cultural production, through popular culture. We will develop our skills as researchers, and as critical consumers, producers and regulators of media. We will think about how cultural production and scientific and technological production influence one another; shaping the future before it exists.

**Key themes** of this module are 1) thinking about how science and culture shape one another, 2) the relationships between producers and publics, 3) thinking about how science is represented (both in terms of *who* is represented when knowledge is produced and why this matters) and 3) thinking about science and popular culture in terms of dominant cultural practices. **Key theories** in this module are about publics/audiences/users, patterns of cultural consumption (and how this is affected by class, 'race'/ethnicity, geography, gender, sexuality, ability/disability and their intersections), communication theory, as well as feminist and post-colonial approaches to understanding culture.

## Basic course information

Course website:	See moodle	
Moodle Web site:	<a href="https://moodle.ucl.ac.uk/course/view.php?id=7422">https://moodle.ucl.ac.uk/course/view.php?id=7422</a>	
Assessment:	50% Media Analysis Assignment, 50% essay	
Timetable:	Lectures recorded. In-person seminars: Tuesdays, 2-3pm. Malet Place Engineering Building 1.19	
Prerequisites:	None	
Required texts:	See syllabus (below), reading list & moodle	
Course tutor(s):	Dr Michel Wahome	Contact: <a href="mailto:m.wahome@ucl.ac.uk">m.wahome@ucl.ac.uk</a>
Office location:	22 Gordon Square, room 2.1	
Office Hours:	In-person: Tuesdays 1500-1700, TERM TIME ONLY or online by appointment: <a href="https://outlook.office365.com/owa/calendar/DrWahomesOfficeHours@live.ucl.ac.uk/bookings/">https://outlook.office365.com/owa/calendar/DrWahomesOfficeHours@live.ucl.ac.uk/bookings/</a>	

## Schedule

UCL	Topic	Date	Preparation Activity
6	Week 1. Introduction to Science in Popular Culture: Art, Science & the Collective Imagination	October 4	Essential readings Watch lecture video Practical activities
7	Week 2. The Circuit of Culture	October 11	Essential readings Watch lecture video Practical activities
8	Week 3. Film & Analysing Discourse	October 18	Essential readings Watch lecture video Practical activities
9	Week 4. Communicating Science	October 25	Essential readings Watch lecture video Practical activities
10	Week 5. Science Fiction & Representation	November 1	Essential readings Watch lecture video Practical activities
11	READING WEEK		
12	Week 6. Digital Media and Identity	November 15	Essential readings Watch lecture video Practical activities
13	Week 7. News Production & News Values	November 22	Essential readings Watch lecture video Practical activities
14	Week 8: Advertising & Regulation	November 29	Essential readings Watch lecture video Practical activities
15	Week 9. Fan-Fiction and (Counter)Programming	December 6	Essential readings Watch lecture video Practical activities
16	Week 10. New Stories that Learn From the Past	December 13	Essential readings Watch lecture video Practical activities

Lecture videos and practical activities can be found on course Moodle page.

## Course Design

This module revolves around the idea that science, society, politics and culture are mutually co-constructed. Studying these interactions is important because it can help us learn who we are, how we are shaped by society, and how to we can contribute to shaping it in return.

Drawing on theories from cultural studies, media studies, sociology and, of course, science and technology studies, we will look at science in popular culture as a *system*, we will look at specific *media*, and we will look at *genre* to try to understand what is being created through these practices. We will discuss how culture and science interact. Who gets to be represented and how are they represented? Who are the producers, consumers and regulators of science in popular culture? What does this matter for our identities and our societies?

### Objectives:

By the end of this module students should be able to:

- critically engage with a range of forms of science-related popular culture;
- understand how science, technology and society are related;
- demonstrate knowledge of the relevant literature for the module;
- demonstrate skills in qualitative discourse analysis;
- appreciate the complexity involved in the presentation of science in popular culture;
- reflect on the role of popular culture in the evolution of scientific debate;

### Activities:

#### **1. Watch the weekly lectures.**

These will be posted online for your to watch on your own time, prior to the weekly seminar on Thursday.

#### **2. Read the Essential Readings and Participate in Seminar Activities**

We will have a weekly seminar where *your participation matters!* During the seminar we will review core ideas and engage in discussion.

Each week has list of essential readings. (There is a list of additional readings--these give you a solid starting point if you focus your media analysis assignment or essay on that week's topic. I would expect to see at least some of them in your essay's reference list too).

After week 1, you will be organised into reading groups/teams. You may wish to divide up the readings amongst yourselves and create notes that summarise them to one another, or read them all and then have discussions about them together.

There will be other activities, like watching the film [Arrival](#), which you can do together.

## Assessments

Description	Deadline	Word limit
Media analysis assignment	23 November 2022	1000 *1500 for Level 6/iBSc students
Summative Essay	12 January 2023	2000 *3000 for Level 6/iBSc students

### 1) Media Analysis Project, 50%

*Word limit: 1000. It is worth your time to hit near that 1000 mark or you will hit under/over-writing penalties, see handbook! Please note that the word limit for iBSc students/students taking the module at level 6 is 1500 words.*

For this assignment, you will have to select **ONE** piece of science in popular culture and you will need to critically analyze it, and build an argument. This can be:

- A feature published in a newspaper
- A popular science book
- A novel
- A museum or science centre display
- An image (photograph, painting, portrait)
- A film (fiction or documentary)
- A TV programme
- A website (including blogs)
- A theatre play
- An advertisement
- A podcast
- A radio show
- A children's book
- An album or artist's discography
- A You Tube vlog

Depending on your choice, different methods of analysis will be at your disposal. But, whatever your method, your analysis should try and answer the following questions and you must use some of the theoretical tools from the module:

- What is the piece under scrutiny about?
- Why did you choose it?
- How does it relate to the topic of the course (science in popular culture)? And what makes it interesting in relation to that topic?
- How do the theories discussed in this course apply to your chosen media item? (i.e. media effects, news values, representation, cultural consumption, structural inequalities and so on).

- What does analyzing this piece of science in the media enable you to claim about science in popular culture?
- What kind of relationship between science and popular culture does your object of analysis foster?
- How is it situated in relation to the production of knowledge? What kind of participation in science does it encourage? What is its contribution in defining the cultural boundaries of science?

Media Analysis Assignments must be structured, written documents. They **must** include a title and a reference list alongside your own research and analysis.

**Think** about what you want to do early on in term, it's not the kind of paper you can write at the last minute. If you need clarification come and talk to me about it during my office hours. This is a really creative assessment and some people have a lot of fun with it, but it is really useful to have support figuring out what artefact to analyse.

## 2) Summative Essay, 50%

You will write a 2000 word essay that answers one of the following five questions:

1. Use your essay to argue for or against the idea that popular culture can change societal attitudes to climate change. Consider the topic of news values and think about what kinds of framing might be effective. George Monbiot is a regular contributor to the Guardian on matters of the environment. Counter or support the ideas in this [article](#) to build your argument.
2. Watch this interview of filmmaker Wanuri Kahiu: <https://youtu.be/SWMtgD9O6PU> Do you agree with her analysis of how science fiction might provide a space in popular culture to engage with imaginaries of past, present and future? What are ways that sci-fi might both resist *and* reproduce stereotypical narratives. (While watching her film, '[Pumzi](#)' is not necessary in order to answer the question—you may enjoy it).
3. Listen to the [Bricks and Mortals](#) podcast, that goes with the museum programme built by Subhadra Das, Curator of the Petrie Collection here at UCL. You can do the full walking tour around parts of the UCL Bloomsbury campus neighbourhood, she gives instructions on the same page & everything is outside. While you listen, think about our discussion on science museums and science centres. Imagine that you were to curate a public exhibition on a science subject of your choice, how would you make it accessible and relevant to a wide audience?
4. You work for a media production house and have been asked by a higher up to prepare a brief essay for colleagues, supported by communications theories, that explains how audiences interact with and learn from media. The goal is for them to produce more persuasive productions. What does your essay say?

5. Citizen science, fan-fiction, co-production and activism are some of the ways that the categories of 'producer' and 'consumer' have been blurred. Using examples, the idea of 'produsage' and explain its benefits to science communicators.

Please note that the word limit for iBSc students/students taking the module at level 6 is 3000 words.

We will discuss the essay and how best to prepare for them during our classes. Main points:

- As with any essay (& the media analysis assignment above) it is crucial to make use of module reading material, the concepts taught in the module and to go beyond these with **your own** research and reading.
- Your essay **must** have an argument and that argument **must** be apparent to readers.
- Essays **must** be structured, that is, they **must** include the title, sub-titles and a reference list.
- The references **must** be correct in the main text and in the reference list. Avoid any interpretation of your work as exhibiting plagiarism at all costs.

**Assessment criteria for all coursework are those found in the STS students' handbook.** You should make sure you have a really good look at them & come and talk with me if you want to figure out what they mean for these assessments in more detail.

## **Week 1. Introduction to Science in Popular Culture: Art, Science & the Collective Imagination**

This week the recordings we will cover a) the goals of the class, discuss the assessment structure & map out the next nine learning sessions and b) draw on ideas about how society develops norms and values. Science is a methodology for understanding and interpreting the world, because it is the pre-eminent way through which we, contemporary humans, interpret the world it shapes our culture. We also use the knowledge that it provides us to create technologies that further impact our culture. We will focus on this idea of science as a facet of culture.

### Essential readings:

1. Martin, J. L. (2010). Life's a beach but you're an ant, and other unwelcome news for the sociology of culture. *Poetics*, (Amsterdam), 38(2), 229–244.
2. Brooke, J. (2014). Visions of the Past: Religious Belief and the Historical Sciences. In *Science and Religion: Some Historical Perspectives* (Canto Classics, pp. 307-373). Cambridge: Cambridge University Press.
3. Wajcman, Judy. "Practising Science as Culture." *Science as culture* 17.3 (2008): 345–347.
4. Graefer, A. (2016). "Reading" Through the Skin: Lady Gaga's Online Representation and Affective Meaning-Making. *Journal of Popular Culture*, 49(3), 522–540.

## **Week 2. The Circuit of Culture**

We will learn about the circuit of culture and use it as a framework for understand how culture is made and circulates in society. We will think about who has authority in this framework and why this is important.

### Essential readings:

1. Du Gay, Paul, Hall, Stuart, Janes, Linda, Madsen, Anders, Koen, Mackay, Hugh, & Negus, Keith (2013). Introduction to the first edition, pp. xxviii – xxxii AND Chapter 1: Making Sense of the Walkman, pp. 2-35. *Doing cultural studies: The story of the Sony Walkman*. Thousand Oaks, CA.: Sage.
2. MacKenzie, Donald and Wajcman, Judy, eds. (1999). "Introductory essay: the social shaping of technology". MacKenzie, D., and Wajcman, J., eds. (1999) *The social shaping of technology*. 2nd ed., Open University Press, Buckingham, UK.
3. Miles, Andrew, & Gibson, Lisanne (2016). Everyday participation and cultural value. *Cultural Trends*, 25(3), 151-157.

## Week 3. Film & Analysing Discourse

This week we will use the film genre to reflect on what cultural products and productions can tell us about society, how popular culture sits within a legacy of socio-political issues about authority, knowledge and whose stories count and what methods we can use to conduct those analyses. We will use the film *Arrival* and its themes to talk about meaning making and language. We will think about the implications of popular versus high-brow', 'special' or 'elite' forms of culture and to question what forms of knowledge, culture and practice are being validated and which are being rendered invisible or insignificant, and to think about why this is important.

### Essential readings:

1. Kirby, D. A. (2014). Science and technology in film: Themes and representations. In *Routledge Handbook of Public Communication of Science and Technology*, Second Edition (pp. 97–112).
2. Hall, Stuart. (Ed.), Recent developments in theories of language and ideology: a critical note, *Culture, Media, Language: Working Papers In Cultural Studies, 1972-79* (pp. 147-153). Birmingham: Unwin Hyman (Publishers) Ltd.
3. Sterne, J. (2014). Media Analysis Beyond Content. *Journal of Visual Culture*, 13(1), 100–103.

## Week 4. Television & Communicating Science

This week we will turn to television in order to tackle theories about how communication happens. Television has been found to be a ubiquitous cultural practice in the UK, but should we assume that putting science on TV makes it accessible or helps people learn? This week we will learn more about communication theory. What happens when you engage with programming? What is conveyed? How do they represent knowledge? How do you understand?

### Essential readings:

1. Hall, Stuart (1980). Encoding/decoding. In S. Hall (Ed.), *Culture, Media, Language: Working Papers In Cultural Studies, 1972-79* (pp. 107-116). Birmingham: Unwin Hyman (Publishers) Ltd.
2. Dingwall, Robert, & Aldridge, Meryl (2006). Television wildlife programming as a source of popular scientific information: a case study of evolution. *Public Understanding of Science*, 15(2), 131-152.
3. Davies, Sarah. R., & Horst, Maja. (2016). "Science communication as culture". Pp. 1-28 in *Science Communication: Culture, Identity and Citizenship*. London: Palgrave.

\*\*\*\*READING WEEK\*\*\*\*



## Week 5. Science Fiction & Representation

This week we'll explore the role of Sci-Fi in popular science, and focus on both how Sci-Fi is understood and what 'work' these kinds of imaginaries do for science and society. We will analyse how science and technology are represented in these films, what the implications of such representation might be. We will talk about other theories of representation and discuss the socio-political and historic context of such representations.

### Essential readings:

1. Chow-White, P. A., Deveau, D., & Adams, P. (2015). Media encoding in science fiction television: *Battlestar Galactica* as a site of critical cultural production. *Media, Culture & Society*, 37(8), 1210-1225.
2. Hall, Stuart. (2013). "The work of representation". Pp. 1-47 in *Representation, Second Edition*. (Eds). Hall, Stuart, Evans, Jessica and Nixon, Sean. The Open University Press: Milton Keynes.
3. Carrington, Andre M. (2016). 'Introduction: The whiteness of science fiction and the speculative fiction of blackness', pp. 1-29 in *Speculative Blackness: The Future of Race in Science Fiction*. London and New York: University of Minnesota Press.
4. Steinke, Jocelyn. (2017). Adolescent Girls' STEM Identity Formation and Media Images of STEM Professionals: Considering the Influence of Contextual Cues. *Frontiers in Psychology*, 8 (716).

## Week 6. Digital Media & Identification

This week we will turn to information and communications technologies (mostly social media). Social media plays a contentious role in the popular science landscape. Part user-generated content, part 'anti-science' platform and at the same time, part of broader, socio-political histories of journalism, reporting, political debate and education. This week we will think about how social media, and how it shapes our identities in the 'real world'.

### Essential readings:

1. Odumosu, T. Making Mobiles African Mavhunga, C.C. (Ed.), (2017)., in: *What Do Science, Technology, and Innovation Mean from Africa?*, The MIT Press, p. 137 – 150
2. Brookwell, I. (2020). "Gamer Citizens": Emojis as Civic Duty in a Circuit of Visual Culture. *Visual Resources*, 36(4), 360–381.
3. Agar, J. (2009). Review of *Cell Phone Culture: Mobile Technology in Everyday Life*, by G. Goggin. *Technology and Culture*, 50(3), 726–728

## Week 7. News Production & News Values

Science and technology are in the news a lot. More than you might think given the extensive efforts around science popularisation, literacy and the deficit model of science communication. This week we examine how science is reported in the news. We learn more about media effects, specifically we will talk about framing and news values. In other words, what makes science newsworthy, why do some stories make it to print? We will be thinking about who produces and who consumes science in the news.

### Essential readings:

1. Post, S., Bienzeisler, N., & Lohöfener, M. (2021). A desire for authoritative science? How citizens' informational needs and epistemic beliefs shaped their views of science, news, and policymaking in the COVID-19 pandemic. *Public Understanding of Science* (Bristol, England), 30(5), 496–514.
2. Nelkin, Dorothy (1995). Chapter 1, pp. 1 – 23 in *Selling science*. New York: W.H. Freeman and Company.
3. Fjaestad, Bjorn (2007). Why journalists report science as they do. In M. W. Bauer & M. Bucchi (Eds.), *Journalism, science and society* (pp. 123-132). New York and Abingdon: Taylor and Francis.

## Week 8: Advertising & Regulation

This week we explore how science/tech are used in adverts and will try to analyse their content (so I've put some papers about analysis on the reading list for this week, this whole exercise is designed to give you some analytic skills in advance of your coursework project!).

### Essential

1. Dodds, Rachel. E., Tseëlon, Efrat, & Weitkamp, Emma. L. C. (2008). Making Sense of scientific claims in advertising. A study of scientifically aware consumers. *Public Understanding of Science*, 17(2), 211-230.
2. Williams, R. (2000). Advertising: the Magic System. *Advertising & Society Review*, 1(1). Williams, Raymond. 1980. Advertising: The magic system. In *Problems in Materialism and Culture*. London: Verso, 170–195. Reprinted with the permission of the author's estate.
3. Benecke, D. ., Simpson, Z., Le Roux, S., Skinner, C. ., van Rensburg, N. J., Sibeko, J., ... Meyer, J. (2017). Cultural intermediaries and the circuit of culture: The Digital Ambassadors project in Johannesburg, South Africa. *Public Relations Review*, 43(1), 26–34.

## Week 9. Fan-Fiction and (Counter)Programming

So far we've discussed science in popular culture that is produced for audiences. We touched on how digital media platforms challenge ideas in the circuit of culture about who the producer is. This week we will build on this to think in more depth about 'user-generated content' (whether it's fan-fiction, activism or something else).

### Essential

1. Bird, S. E. (2011). Are we all producers now? *Cultural Studies*, 25(4-5), 502-516.
2. Orthia, L. A. (2020). Strategies for including communication of non-Western and indigenous knowledges in science communication histories. *Journal of Science Communication*, 1-17.
3. Hyysalo, S., 2009. User innovation and everyday practices: micro-innovation in sports industry development. *R & D management*, 39(3), pp.247–258.

## Week 10. New Stories That Learn from the Past

In this final class, we will use all the ideas we have been learning about to think about why and how we can contribute to the cultural imaginary. We will think about how popular versus high-brow', 'special' or 'elite' have been framed in the past, how science has fit within this framework and to question what forms of knowledge, culture and practice are being validated and which are being rendered invisible or insignificant, and to think about why this is important.

### Essential

1. Das, S., & Lowe, M. (2018). Nature Read in Black and White: decolonial approaches to interpreting natural history collections. *Journal of Natural Science Collections*, 6, 4-14.
2. Lynall, G. (2022). Solarpunk. In A. Johns-Putra & K. Sultzbach (Eds.), *The Cambridge Companion to Literature and Climate* (Cambridge Companions to Literature, pp. 191-200). Cambridge: Cambridge University Press.
3. el Nabolsy, Z., 2020. Amílcar Cabral's modernist philosophy of culture and cultural liberation. *Journal of African cultural studies*, 32(2), pp.231–250.
4. Frank A. J. L. James (2016) Introduction: Some Significances of the Two Cultures Debate, *Interdisciplinary Science Reviews*, 41:2-3, 107-117