# **HPSC0089 Curating Science & Technology**

# **Course Syllabus (2023/24)**

## Module leaders

Dr Stacy Hackner, Research Manager

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Dr Sophie Waring, Curator of Contemporary Science

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## Course overview

This module is designed around a simple question: how is the museum a different environment for historical and interpretative work related to science and technology, as compared with a university? It opens up access to the Science Museum’s galleries, collections and curators, revealing the ways that the history of science and technology are preserved, researched, and displayed in a national museum.

This course involves a consideration of the history of museums, curatorial work and general museological questions about how to use objects in historical work. It discusses how different topics and kinds of objects feature in the museum’s work, from acquisition through to being placed on display. Curators and other researchers will present and discuss a variety of case studies, helping students to acquire a rich sense of what it means to curate science, and especially the history of science, in a public museum. Dissertations may also be written on museum topics.

## Essential information

Moodle website: <https://moodle.ucl.ac.uk/course/view.php?id=37553>

Assessment[[1]](#footnote-2):

1. One collective group presentation in week 5 on the themes of the course (20%) comprised of two segments:
   1. A formative weekly journal entry related to each week’s theme
   2. A summative group presentation, building from those journal entries
2. One written piece of 3,000 words combining elements of object biography and catalogue (perhaps of an imaginary exhibition) that demonstrates how museum objects and/or collections can be used to provide insights into the history of STEM (80%)

Timetable link: TBC

Prerequisites: None

Required text: Samuel J.M.M. Alberti (2022) *Curious Devices and Mighty Machines: Exploring Science Museums* (London: Reaktion Books)

Module leaders: Dr Stacy Hackner, Research Manager; and Dr Sophie Waring, Curator of Contemporary Science

Teaching assistant: Dr Rebecca Mellor, Assistant Curator – Exhibitions

Contact: [stacy.hackner@sciencemuseum.ac.uk](mailto:emily.rees@sciencemuseum.ac.uk) in the first instance.

Office location and hours: Dana Research Centre, 165 Queen’s Gate, London, SW7 5HD; by appointment only.

## Aims & Objectives

Aims:

* To give insights into how museum staff understand and mobilise the material culture of science, technology and medicine in theory and in practice.
* To link by subject and in theoretical approaches with the broader STS and HPS courses at UCL.

Objectives:

* To examine a range of material objects from across science, technology and medicine.
* To explore how authors from various traditions have written about the material culture of science etc.
* To provide insights into how science museums collect, document, research, and display across science, technology and medicine.
* To provide the opportunity and the structure for students to discuss, present and write about these topics.
* To seek connections with the STS and HPS literature.

## Schedule

All classes take place on Wednesday, 13:00-15:00, in the Dana Studio at the Dana Research Centre 165 Queen’s Gate, London, SW7 5HD.

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| --- | --- | --- | --- |
| **UCL Week** | **Date** | **Topic** | **Tutors** |
| 1 | 10 January | Museum | Sophie Waring and  Stacy Hackner |
| 2 | 17 January | Object | Sophie Waring and Will Sims |
| 3 | 24 January | Context | Imogen Clarke and Sophie Waring |
| 4 | 31 January | Audience | Kate Steiner |
| 5 | 7 February | Student Presentations | N/A |
| 6 | 14 February | Reading week | N/A |
| 7 | 21 February | Scientists & Curators | Ben Russell and Sophie Waring |
| 8 | 28 February | Collecting & Displaying | Katie Dabin / Richard Dunn |
| 9 | 6 March | Interpretation for Science Galleries | Frances Reed |
| 10 | 13 March | Ethics & Inclusion: Part 1 | Lily Hayward and Rebecca Mellor |
| 11 | 20 March | The role of museums in social change | Stacy Hackner (+others) |

## Assessments

Assessment 1:

* One collective group presentation in week 5 on the themes of the course (20%).
* Deadline: Wednesday 7 February
* Word limit: 10 minutes
* Deadline for tutors to provide feedback: Wednesday 28 February

Assessment 2:

* One written piece of 3,000 words combining elements of object biography and catalogue (perhaps of an imaginary exhibition) that demonstrates how museum objects and/or collections can be used to provide insights into the history of STEM (80%)
* Deadline: Wednesday 3 April – TBC by UCL
* Word limit: 3,000 words
* Deadline for tutors to provide feedback: Wednesday 1 May – TBC by UCL

Submission requirements: All assessments must be submitted as a PDF or Word file on Moodle.

Specific assessment criteria for this module: Students are expected to combine STS / HPS insights and theory with a specific focus on material culture / museum objects. Both the presentation and the essay should convey engagement with the course readings.

## Reading List

Samuel J.M.M. Alberti (2022) *Curious Devices and Mighty Machines: Exploring Science Museums* (London: Reaktion Books).

P. Morris (ed) (2010), *Science for the Nation: Perspectives on the History of the Science Museum* (Basingstoke: Palgrave Macmillan).

See also papers in the Science Museum Group E-Journal: <http://journal.sciencemuseum.org.uk/>

## Detailed Syllabus

### Week 1: What is a Museum? (10 January)

Lecturers:

**Overview:** This session starts exploring how and why museums curate science and technology. We introduce students to the Science Museum, its diverse collections and some of the stories that we’re helping to tell about them.

**Essential reading:**

* Robert Bud, ‘Infected by the Bacillus of Science: The Explosion of South Kensington’. *Science for the Nation: Perspectives on the History of the Science Museum*, ed. Peter Morris (Palgrave Macmillan, 2010), 11-40.
* Science Museum Inspiring Futures Strategic Priorities: 2017-2030 Reissued 2020.

<https://www.sciencemuseumgroup.org.uk/sites/default/files/2023-11/SMG-Inspiring-Futures-May-2020.pdf>

**Background reading:**

* Tony Bennett, *The Birth of the Museum: History, Theory, Politics* (Routledge, 1995), 89-105 (Chapter 3)
* Alison Boyle, ‘“Not for Their Beauty”: Instruments and Narratives at the Science Museum, London’. *Scientific Instruments on Display*, ed. Silke Ackermann (Brill, 2014), 37-60
* John V. Pickstone, ‘Museological Science? The Place of the Analytical/Comparative in Nineteenth-Century Science, Technology and Medicine’. *History of Science*, 32:2 (June 1994), 111-138.
* Nick Thomas, ‘The Museum as Method’, *Museum Anthropology*, 33:1 (2010), 6-10.#

### Week 2: Object (17 January)

Lecturers: Sophie Waring & Will Sims

**Overview:** Why do museums keep so much stuff? We use objects for memorialisation and inspiration in our displays, but can they tell us anything new? This week we will explore what makes an object suitable for the Science Museum collection, as well as the journeys and endless potential of the SMG collection.

**Essential reading:**

* [Collecting Policy](https://www.sciencemuseumgroup.org.uk/sites/default/files/2023-11/smg-collection-development-policy-2021_0.pdf)
* Contemporary Collecting Plan 2024

**Background reading:**

* Michael Thompson, *Rubbish Theory: The Creation and Destruction of Value* *- New Edition* (Pluto Press, 2017), Chapters One and Two.
* Marta C. Lourenço and Samuel Gessner, ‘Documenting Collections: Cornerstones for More History of Science in Museums’ *Science & Education* 23:4 (2014): 727-45.

### Week 3: Context (24 January)

**Lecturers:** Sophie Waring, Curator of Contemporary Science and Imogen Clarke, Interpretation Developer

**Overview:** This session explores how objects and stories are collected and interpreted for display and considers the wider shift in approach away from sequentialism and towards capturing personal perspectives and narratives. We will reflect on the opportunities and challenges involved in collecting and contextualising Covid-19 for visitors.

**Essential reading:**

* Alison Boyle*, ‘Festschrift:* of mice and myths: challenges and opportunities of capturing contemporary science in museums’, *Science Museum Group Journal* (2020): [http://journal.sciencemuseum.ac.uk/browse/issue-13/festschrift-of-mice-and-myths/](https://eur02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fjournal.sciencemuseum.ac.uk%2Fbrowse%2Fissue-13%2Ffestschrift-of-mice-and-myths%2F&data=04%7C01%7CNicola.Froggatt%40ScienceMuseum.ac.uk%7C977d8b13b7e64e43654b08d9addb3cbd%7Ce967bcc0c07041c89f7e806069f6330b%7C1%7C0%7C637731979384430420%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=3hVwYFRg0PFydbi70Fk6AONsgtKOz7Rwqw%2BuyzJqhrQ%3D&reserved=0)

**Background reading:**

* Samuel J.M.M. Alberti, Elsa Cox, Tacye Phillipson & Alison Taubman, ‘Collecting contemporary science, technology and medicine’, *Museum Management and Curatorship*, 33:5 (2018), 402-427. DOI: [10.1080/09647775.2018.1496353](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1080%2F09647775.2018.1496353&data=04%7C01%7CNicola.Froggatt%40ScienceMuseum.ac.uk%7C977d8b13b7e64e43654b08d9addb3cbd%7Ce967bcc0c07041c89f7e806069f6330b%7C1%7C0%7C637731979384440387%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=douuZ%2BrZPeHgf%2B3YGVS9Dc63FCPt9bfHjAnYMENkJ9o%3D&reserved=0)
* Mark Woolmer, You’re a what? Interpreting Interpretation to Non-interpreters, *Museum+Heritage Advisor*, Blogpost (2017): <https://advisor.museumsandheritage.com/blogs/youre-interpreting-interpretation-non-interpreters/>
* Laura Spinney, ‘What are COVID archivists keeping for tomorrow’s historians?’ *Nature* 588, 578-580 (2020): [https://www.nature.com/articles/d41586-020-03554-0](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.nature.com%2Farticles%2Fd41586-020-03554-0&data=04%7C01%7CNicola.Froggatt%40ScienceMuseum.ac.uk%7C977d8b13b7e64e43654b08d9addb3cbd%7Ce967bcc0c07041c89f7e806069f6330b%7C1%7C0%7C637731979384440387%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=1%2F7OBURW9bLdPu8hvJH4Fzed8HA5IQxuk0sZRaMGYb4%3D&reserved=0)

### Week 4: Audience (31 January)

**Lecturers**: Kate Steiner

**Overview:** Museums are social spaces, full of objects and exhibitions for people to visit, look at, and sometimes to touch. However, who visits our museum and how do they experience it? How can museums engage with different audiences and evaluate societal change?

In this session we will be thinking about:

* Who comes to Museums?
* What is their experience like?
* Who doesn’t come? – increasing participation
* Science capital: Theory and practice that can improve the visitor experience

**Essential reading:**

* Chapter 4, “Engaging Objects”. Samuel J.M.M. Alberti (2022) *Curious Devices and Mighty Machines: Exploring Science Museums* (London: Reaktion Books).
* Science Museum Group *Engaging All Audiences with Science*: <https://www.sciencemuseumgroup.org.uk/wp-content/uploads/2018/10/science-museum-group-engaging-all-audiences-with-science.pdf>
* Susan Anderson, ‘Visitor and Audience Research in Museums’ pg 80 in *The Routledge Handbook of Museums Media and Communications,* Eds Kirsten Drotner, Vince Dziekan, Ross Parry and Kim Christian Schroder (pdf attached)

**Background reading:**

* ‘Embedding plurality: exploring participatory practice in the development of a new permanent gallery’, Katy Bunning, Jen Kavanagh, Kayte McSweeney and Richard Sandell, Science Museum Group Journal, 2015 <https://journal.sciencemuseum.ac.uk/article/embedding-plurality/>
* (This is a case study of a co-curated project at the Science Museum)
* Falk, J. and Dierking, L.: *The Museum Experience revisited*, Left Coast Press, 2012. (This is a classic – reissued - text for ways to conceptualise visitor engagement with museums). See also <https://www.youtube.com/watch?v=XDP87JEC3D4> for an online presentation of their key ideas.
* Simon N. *The Art of Relevance, 2016*. Nina Simon is one of the most well-known writers on participation (cf also her *The Participatory Museum*) You can get a flavour of her ideas in her Ted talk here <https://www.youtube.com/watch?v=NTih-l739w4>

### Week 5: Student Presentations (7 February)

Lecturers:

This week is dedicated to students’ assessed group presentations. We will not have an in-person seminar; instead, groups will post their recorded presentation online and engage with questions from tutors and their peers.

### Week 6: Reading Week (14 February)

No class.

### Week 7: Scientists & Curators (21 February)

Lecturers: Ben Russell & Sophie Waring

**Overview:** This session examines the role of curators and popular scientists in developing public understanding of science, technology, and medicine. How have these professions changed over time and to what extent do these ‘public figures’ reflect the ideas and values of the day?

**Essential reading:**

**Background reading:**

### Week 8: Collecting & Displaying (28 February)

Lecturers: Katie & Richard Dunn

**Overview:** This session considers and critiques existing museum collecting and display strategies by focusing on the development of a new gallery at the Science Museum: *Horizons*. Please come prepared to discuss the following questions:

* + What does contemporary science mean in the context of museum collecting and display?
  + Who gets to decide what museums display and what stories they tell?
  + What roles can objects have in displays of contemporary science? What strengths and weaknesses might they have as tools for audience engagement?
  + Can the display of science and technology in museums be neutral?

**Essential reading:**

* Erminia Pedretti and Ana Maria Navas Iannini, *Controversy in Science Museums* (Routledge, 2020), Chapter 3 (pp. 48-65): Generations of science museums: Changing roles, changing goals
* Jennifer DeWitt, Effrosyni Nomikou and Spela Godec, ‘Recognising and valuing student engagement in science museums’, Museum Management and Curatorship, 34:2 (2019), 183-200
* Les Levidow, ‘Domesticating biotechnology: How London's Science Museum has framed the controversy’, *Ecologist*, 28 no. 3 (May-June 1998), 143-145

**Background reading:**

* Samuel J.M.M. Alberti, Curious Devices and Mighty Machines: Exploring Science Museums (Reaktion Books, 2022), Chapter 5: Campaigning with collections
* Sharon Macdonald and Roger Silverstone (1992), ‘Science on display: the representation of scientific controversy in museum exhibitions’, Public Understanding of Science, 1(1), 69-87
* Alison Boyle and Harry Cliff, ‘Curating the collider: using place to engage museum visitors with particle physics’, Science Museum Group Journal, 2 (2014) <https://dx.doi.org/10.15180/140207>
* Alison Boyle, ‘Stories and silences in modern physics collections: an object biography approach’ (PhD, UCL, 2019), Chapter 4 (pp. 153-226): Dissembling displays: atomic pile models and concealed stories <https://discovery.ucl.ac.uk/id/eprint/10113201/>

### Week 9: Interpretation for Science Galleries (6 March)

Lecturers: Frances Reed

**Overview:** This session explores the opportunities and challenges involved in the creation of new galleries at the Science Museum.

**Essential reading:**

* Museums + Heritage Advisor – Blog - [https://advisor.museumsandheritage.com/blogs/youre-interpreting-interpretation-non-interpreters/](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fadvisor.museumsandheritage.com%2Fblogs%2Fyoure-interpreting-interpretation-non-interpreters%2F&data=05%7C01%7CStacy.Hackner%40ScienceMuseum.ac.uk%7Cbe34d64bb58c4a85dc5108dbf0ce406a%7Ce967bcc0c07041c89f7e806069f6330b%7C1%7C0%7C638368540853203647%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=2TiojdykEnzwU7GR9aSUBJQM5VoqtcMLQdtpcpzK3VA%3D&reserved=0)
* Carter, J. A sense of place – pdf online - [https://www.jamescarter.cc/wp-content/uploads/2014/09/A\_Sense\_of\_Place\_James\_Carter.pdf](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.jamescarter.cc%2Fwp-content%2Fuploads%2F2014%2F09%2FA_Sense_of_Place_James_Carter.pdf&data=05%7C01%7CStacy.Hackner%40ScienceMuseum.ac.uk%7Cbe34d64bb58c4a85dc5108dbf0ce406a%7Ce967bcc0c07041c89f7e806069f6330b%7C1%7C0%7C638368540853212708%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=gbRWNc35i96FyGqqH%2FXMc3kKh6%2BDgyQITEvYERtkrbg%3D&reserved=0)
* AHI online resources - [https://ahi.org.uk/wp-content/uploads/2022/09/AHI\_BPG\_15\_Heritage\_Interpretation\_in\_the\_Public\_Realm\_2022.pdf](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fahi.org.uk%2Fwp-content%2Fuploads%2F2022%2F09%2FAHI_BPG_15_Heritage_Interpretation_in_the_Public_Realm_2022.pdf&data=05%7C01%7CStacy.Hackner%40ScienceMuseum.ac.uk%7Cbe34d64bb58c4a85dc5108dbf0ce406a%7Ce967bcc0c07041c89f7e806069f6330b%7C1%7C0%7C638368540853219318%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=N7ZAQyFC8i%2BQPknuBRtYgt897a0DGHExfcETwepIocI%3D&reserved=0)
* AIM Museum Displays and Interpretation – pdf online - [https://aim-museums.co.uk/wp-content/uploads/2022/11/AIM-Succes-Guide-Museum-Displays-and-Interpretation-FINAL-smaller.pdf](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Faim-museums.co.uk%2Fwp-content%2Fuploads%2F2022%2F11%2FAIM-Succes-Guide-Museum-Displays-and-Interpretation-FINAL-smaller.pdf&data=05%7C01%7CStacy.Hackner%40ScienceMuseum.ac.uk%7Cbe34d64bb58c4a85dc5108dbf0ce406a%7Ce967bcc0c07041c89f7e806069f6330b%7C1%7C0%7C638368540853225164%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=P7d9XbAnyCHo5J6uvo1FN3e2hgzqyRcYXpofaBMb9ZY%3D&reserved=0)
* Tilden, F. (1957) Interpreting Our Heritage. Chapel Hill: University of North Carolina Press.
* Slack, S. (2021) Interpreting Heritage: A guide to planning and practice. Routledge.

**Background reading:**

* Ham, S. (2013) Interpretation: Making a difference on purpose. Fulcrum Publishing.
* Simon, N. (2010) The Participatory Museum. Museum 2.0.

### Week 10: Ethics & Inclusion: Part 1 (13 March)

Lecturers: Rebecca Mellor & Lily Hayward

**Overview:** In recent years the museum and heritage sector has increasingly sought to grapple with the legacies of empire. How should museum workers confront their institutions’ colonial and imperial pasts? How should objects associated with these pasts be displayed and interpreted for everyone? And can museums truly be places that are open for all?

**Essential reading:**

* Tilly Blyth, (2020). ‘Rethinking collections research’, Science Museum Group blog: <https://www.sciencemuseumgroup.org.uk/blog/rethinking-collections-research/>
* Dan Hicks, (2020). *The Brutish Museum*, Pluto Press. Chapter 1, “The Gun that Shoots Twice”.
* Subhadra Das., Miranda Lowe, (2018). “Nature Read in Black and white: decolonial approaches to interpreting natural history collections”, Journal of Natural Science Collections, Vol 6, pages 4 – 1

**Background reading:**

* Zaheer Baber, (2016). “The Plants of Empire: Botanic Gardens, Colonial power and Botanical Knowledge”, Journal of Contemporary Asia, Vol 46, pages 659 - 769
* Robin McKie, (2022). ‘Wellcome Collection in London shuts ‘racist, sexist and ableist medical history gallery’, Guardian article: <https://www.theguardian.com/culture/2022/nov/27/wellcome-collection-in-london-shuts-racist-sexist-and-ableist-medical-history-gallery>
* Lucile H. Brockway, (2009). “Science and Colonial Expansion: The role of the British Royal botanic Gardens”, American Ethnologist, Vol 6, pages 449 - 465

### Week 11: Museums and Activism (20 March)

Lecturers: Stacy Hackner

**Overview:** In this session, we’ll wrap up with a brief history of museums – how did they get to where they are today? We’ll discuss how museums have been affected by controversies, from protests around nuclear power to questions over patronage. What role do museums play in activism and social change?

**Essential reading:**

* Cameron, F. 2007. ‘Moral lessons and reforming agendas: history museums, science museums, contentious topics and contemporary societies.’ In S. J. Knell et al. eds. *Museum revolutions: how museums change and are changed*. Abingdon: Routledge, pp.330-342.
* Students should also have a browse of the website: <https://www.museumsarenotneutral.com/>
* Geraldine Kendall Adams, ‘To tackle the climate emergency, museums must learn to let go’, Museums Journal Sept/Oct 2022, online here: <https://www.museumsassociation.org/museumsjournal/analysis/2022/09/to-tackle-the-climate-emergency-museums-must-learnto-let-go/>

**Background reading:**

* Sophie Forgan, ‘Building the Museum: Knowledge, Conflict, and the Power of Place’, Isis, 96 (2005), 572-85
* Tony Bennett, The Birth of the Museum: History, Theory, Politics (Routledge, 1995), 89-105 (Chapter 3)

1. For further information regarding assessments (including word counts, late submissions and possible penalties) please refer to the STS appropriate programme page i.e B.Sc or M.Sc [↑](#footnote-ref-2)