HPSC0089 Curating Science & Technology

Course Syllabus

2019-20 session | Dr Tim Boon | tim.boon@sciencemuseum.ac.uk

Course Information

Introduction

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. The module involves a consideration of the history of museums, curatorial work and general museological questions about how to use objects in historical work. The course discusses how different topics and kinds of objects feature in the museum's work, from acquisition through to being placed on display. From the variety of case studies that the curators present, students will 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.

Basic course information

Course website:	
Moodle Web site:	https://moodle.ucl.ac.uk/course/view.php?id=38691
Assessment:[1]	One joint (groups of c.3 students) presentation (week 4) on the themes of the course (20%) One written piece of 4,000 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:	http://www.ucl.ac.uk/sts/module-information/pg-modules
Prerequisites:	None
Required texts:	P. J. T. Morris (ed) (2013), *Science for the Nation: Perspectives on the History of the Science Museum* (Basingstoke: Palgrave Macmillan). Paperback: 2013.Especially: Chapters 1, 5, 7, 10.
Course convener:	Dr Tim Boon, Head of Research & Public History, Science Museum
Contact:	tim.boon@sciencemuseum.ac.uk | t: 020 7942 4207
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[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

Schedule

UCL Week	Topic / location	Date	Tutors
1	Introduction to Museum History	15 Jan	**Tim Boon and Sarah Wade**
2	Object Stories	22 Jan	**Ali Boyle and Sophie Waring**
3	Exhibition: Top Secret	29 Jan	**Liz Bruton**
4	Presentations by students	5 Feb	
5	Galleries: Science City	12 Feb	**Alex Rose**
6	**Reading Week**	19 Feb	
7	Collections: Art at the Science Museum	26 Feb	**Katy Barrett and Sarah Wade**
8	Galleries: Displaying Space	4 Mar	**Doug Millard**
9	Collections: Considering Infrastructure	11 Mar	**Oliver Carpenter and David Rooney**
10	Projects: Sound & Music in Museums	18 Mar	**Tim Boon and Aleks Kolkowski**
11	Galleries: Medicine Galleries	25 Mar	**Imogen Clarke, Katie Dabin, Selina Hurley and Sarah Wade**

Assessments

Summary

	Description	**Deadline**	**Word limit**	**Deadline for Tutors to provide Feedback**
Joint presentation	One joint (groups of c.3 students) presentation (week 4) on the themes of the course (20%)	5 February	10 mins	26 February

Long Essay	One written piece that demonstrates how museum objects and/or collections can be used to provide insights into the history of STEM (80%)	03 April	4,000 words	8 May

Assignments
To be submitted as PDF or Word file to Moodle. Word length excludes appendices.

Specific Criteria for Assessment 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.

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.

Reading list		
General Introduction: 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/		
Topic	**Date**	**Readings**
1. Introduction to Museum History	15 Jan	**Session overview:** This session introduces students to the birth of the modern museum and the history of the Science Museum. We consider the development of museums from the early modern cabinet of curiosities to the 19th and 21st century museum and learn about the origins of the Science Museum. **Essential reading:** **Film:** *The Building and Operation of Industrial Museums* (1928) (online) • Daston, Lorraine and Katherine Park, 'Wonders of Art, Wonders of Nature', in *Wonders and the Order of Nature: 1150–1750* (New York: Zone Books, 2001), pp.255-301 • Berkowitz, Carin, et al., editors. 'Botany Behind Glass: The Vegetable Kingdom on Display at Kew's Museum of Economic Botany'. *Science Museums in Transition: Anglo-American Cultures of Display in the Nineteenth Century*, University of Pittsburgh Press, 2017, pp. 188–213 • Bud, Robert. 'Infected by the Bacillus of Science: The Explosion of South Kensington'. *Science for the Nation: Perspectives on the History of the Science Museum*, edited by Peter Morris, Palgrave Macmillan, 2010, pp. 11–40 • Forgan, Sophie, 'Building the Museum: Knowledge, Conflict, and the Power of Place', *Isis*, 96 (2005), 572–85 **Background reading:** • Arnold, Ken, *Cabinets for the Curious: Looking Back at Early English Museums* (Aldershot: Ashgate, 2005) – Introduction and Chapter 2, pp.1-41 • Bennett, Tony. *The Birth of the Museum: History, Theory, Politics*, Routledge, 1995, Chapter 3, pp.89-105 • Boon, Timothy. 'Parallax Error? A Participant's Account of the Science Museum, c.1980-c.2000'. *Science for the Nation: Perspectives on the History of the Science Museum*, edited by Peter Morris, Palgrave MacMillan, 2010, pp. 111–36 • Pickstone, John V. 'Museological Science? The Place of the Analytical/Comparative in Nineteenth-Century Science, Technology and Medicine'. *History of Science*, vol. 32, no. 2, June 1994. *ProQuest*, http://search.proquest.com.libproxy.ucl.ac.uk/docview/1298070264/citation?accountid=14511
2. Object Stories	22 Jan	**Session 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? In this class we will explore different ways of studying material culture, and introduce the Science Museum's object records. **Essential reading:** • Alberti, Samuel J. M. M., 'Objects and the Museum', Isis, 96 (2005), 559–71 • DeVorkin, David H. 'Space Artifacts: Are They Historical Evidence?', in *Critical Issues in the History of Spaceflight*, ed. Steven J. Dick and Roger D. Launius (Washington, D.C.: National Aeronautics and Space Administration, Office of External Relations, 2006), 578.

		• Prown, Jules David, "Material/Culture: Can the Farmer and the Cowman Still Be Friends?," in *Learning from Things: Method and Theory of Material Culture Studies*, ed. W. D. Kingery (Washington, D.C: Smithsonian Institution Press, 1996), 22 **Background reading:** • Hannan, Leonie, and Sarah Longair. *History through Material Culture*. IHR Research Guides. Manchester: Manchester University Press, 2017. • Pantalony, David, "Biography of an Artifact: The Theratron Junior and Canada's Atomic Age," *Scientia Canadensis: Canadian Journal of the History of Science*, Technology and Medicine 34, no. 1 (2011): 51, doi:10.7202/1006928ar. • Thompson, Michael. *Rubbish Theory: The Creation and Destruction of Value - New Edition.* Pluto Press, 2017. Chapters One and Two. • Lourenço, Marta C. and Samuel Gessner, 'Documenting Collections: Cornerstones for More History of Science in Museums', *Science & Education* 23, no. 4 (1 April 2014): 727–45.
3. Exhibition: Top Secret	29 Jan	**Session overview:** From the trenches of the First World War to the latest in cyber security, Science Museum exhibition *Top Secret* explores over a century's worth of communications intelligence through hand-written documents, declassified files and previously unseen artefacts from the Science Museum Group's and GCHQ's historic collections. We will explore the creation and curation of this exhibition and consider how a Science Museum exhibition can explore complex and often emotive issues of digital privacy and national security in our current age of cyber security. **Essential reading:** • Aldrich, Richard J. *GCHQ: The Uncensored Story of Britain's Most Secret Intelligence Agency*. London: Harper Press, 2019, pp. 1-98. • Corera, Gordon. *Intercept: The Secret History of Computers and Spies.* London: Weidenfeld & Nicolson, 2016, pp. 1-102. • Varghese, Sanjana. "GCHQ's centenary: the art of espionage in a digital age," in *the New Statesman*, 15 July 2019. URL: https://www.newstatesman.com/science-tech/privacy/2019/07/gchq-s-centenary-art-espionage-digital-age
4. Presentations by students	5 Feb	This session is dedicated to student group presentations.

5. Galleries: Science City	12 Feb	**Session overview:** This session uses the recently opened *Science City 1550–1800* gallery to explore the roles scientific instrument collections can play in studying and communicating the history of science. We will first consider the types of objects that have become classified as 'scientific instruments' within museum collections, and then consider some of the factors that shape the narratives that we present within the museum. **Essential reading:** • D. Warner (1990), What is a Scientific Instrument, When did it Become one, and Why?, *British Journal for the History of Science,* 23, 83-93 • Samuel J M M Alberti (2018), Shaping Scientific Instrument Collections: A Historiography, *Journal of the History of Collections*, fhy046, https://doi.org/10.1093/jhc/fhy046 • Bennett, Jim, 'Early Modern Mathematical Instruments', *Isis*, 102 (2011), 697-705 **Background reading:** • Rebekah Higgitt (2018), Instruments and relics: The history and use of the Royal Society's object collections *c.*1850–1950, *Journal of the History of Collections*, fhy038, https://doi.org/10.1093/jhc/fhy038 • A. V. Helden and T. L. Hankins (1994), 'Introduction', in Albert Van Helden and Thomas L. Hankins (eds.), *Osiris: Instruments* (Chicago: University of Chicago Press) • Jim Bennett, Knowing and Doing in the Sixteenth Century: What Were Instruments For? in *British Journal for the History of Science*, Vol. 36, No. 2 (June 2003), pp.129-150 • Alexandra Rose and Jane Desborough (2019), Introduction, in *Science City 1550-1800: craft, commerce and curiosity*, London: Scala
6. Reading Week	19 Feb	
7. Collections: Art and the Science Museum	26 Feb	**Session overview:** This session introduces students to the Science Museum's art collections as well as the history of art/science collaborations in modern and contemporary art. We consider the presentation and curation of artworks in the context of a Science Museum and discuss what art can add to conversations about science in the contemporary museum. **Essential reading:** • Jardine, Boris, 'Made Real: Artifice and Accuracy in Nineteenth-Century Scientific Illustration', *Science Museum Group Journal* (2) Autumn 2014 • Redler, Hannah, 'Where are we now? Art, Science and Interdisciplinary Practice', Transcript from keynote presentation for *Animate Silent Signal* conference, February 2016 • Robbins, Claire, 'Introduction', in *Curious Lessons in the Museum: The Pedagogic Potential of Artists' Interventions* (London & New York: Routledge, 2013), pp. 1-14 **Background reading:** • Ian Blatchford and Tilly Blyth, eds., *The Art of Innovation: From Enlightenment to Dark Matter* (Bantam Press, 2019) • Paul Glinkowski & Anne Bamford, Insight & Exchange: An Evaluation of the Wellcome Trust's Sciart Programme (Wellcome Trust, 2009)

8. Galleries: Displaying Space	4 Mar	**Session overview:** This session considers and critiques existing modes of space exploration museum displays. It suggests a widespread norm which presupposes technical interest on the part of audiences. Further, it indicates broader, culturally inclusive narratives offer more meaningful and attractive themes to entice the sceptical museum visitor. **Essential reading:** • Durrans, Brian, 'Space Is the Place'. *Showcasing Space*, edited by Martin Collins and Doug Millard, Science Museum, 2005, pp. 169- 79 • Geppert, Alexander C. T., (Ed.), *Imagining Outer Space: European Astroculture in the Twentieth Century, Palgrave Macmillan*, 2012 • Gouyon, Jean-Baptiste (2014) '"Something Simple and Striking, If Not Amusing" – the Freedom 7 Special Exhibition at the Science Museum, 1965'. Science Museum Group Journal, vol. 1, no. 01, 2014. doi:10.15180/140105 • McCurdy, Howard E., *Space and the American Imagination*, Johns Hopkins University Press; second edition. • Millard, Doug 'Cosmonauts: Birth of an Exhibition'. Science Museum Group Journal, vol. 5, no. 05, 2016, doi:10.15180/160508.
9. Collections: Considering Infrastructure	11 Mar	**Session overview:** What do we mean by 'infrastructure' and in what ways can it be considered in the context of museum collections? How can infrastructure be 'collected', displayed and interpreted by museums? In this session, which will include fieldwork in the streets outside the Science Museum and in its galleries, we will consider a range of approaches to address these issues. **Essential reading:** • Hughes, T.P., 'The Evolution of Large Technological Systems', in *The Social Construction of Technological Systems*, ed. by W.E. Bijker, T.P. Hughes and T.J. Pinch (Cambridge, Mass.: MIT Press, 1987), pp. 51–82 • Hamlin, Christopher, 'Edwin Chadwick and the Engineers, 1842-1854: Systems and Antisystems in the Pipe-and-Brick Sewers War', *Technology and Culture*, 33 (1992), 680–709 • Gunn, Simon, 'The Buchanan Report, Environment and the Problem of Traffic in 1960s Britain', *Twentieth Century British History*, 22 (2011), 521–42 https://doi.org/10.1093/tcbh/hwq063 • David Rooney, *Spaces of Congestion and Traffic: Politics and Technologies in Twentieth-Century London* (Routledge, 2018), chapter 6, 'Scientists, sensors, and surveillance', pp. 143-170

10. Projects: Sound & Music in Museums	18 Mar	**Session overview**: In this class, we think about the themes of the course via the sense of hearing, rather than vision. We think about what musical instruments have in common with scientific ones, and imagine what an exhibition about science and music might contain. During the class we will record our voices on a vintage Edison phonograph cylinder. **Essential reading:** • Boon, Tim; Jamieson, Annie; Kannenberg, John: Kolkowski, Aleks and Mansell, James. 'Organising Sound': how a research network might help structure an exhibition', Science Museum Journal, Autumn 2017, Issue 08: http://dx.doi.org/10.15180/170814 • Jackson, Myles W. 'From Scientific Instruments to Musical Instruments: The Tuning Fork, the Metronome, and the Siren', *The Oxford Handbook of Sound Studies* Ed. Trevor Pinch and Karin Bijsterveld, Nov. 2012. • Hankins, T. L. & Silverman, R. J. Instruments and the Imagination (Princeton: Princeton University Press, 1995) **Background reading** • Kolkowski, Aleksander, and Alison Rabinovici, 'Bellowphones and Blowed Strings: The Auxeto-Instruments of Horace Short and Charles Algernon Parsons', in *Material Culture and Electronic Sound*, ed. by Frode Weium and Timothy Boon, Artefacts (Washington: Smithsonian Scholarly Press, 2012), pp. 1–42 • Boon, Timothy M, 'Music for Spaces: Music for Space: An Argument for Sound as a Component of Museum Experience', *Journal of Sonic Studies* (2014) • Jackson, Myles W., *Harmonious Triads: Physicists, Musicians, and Instrument Makers in Nineteenth-Century Germany* (Cambridge, Mass: The MIT Press, 2006) • Sterne, Jonathan. The Audible Past: Cultural Origins of Sound Reproduction (Durham, North Carolina: Duke University Press, 2003

11. Galleries: Medicine	25 Mar	**Session overview:** This session takes place in the new medicine galleries. Students will reflect on the challenges relating to displaying health and medicine and includes discussions on the presentation of objects relating to mental health and disability in the gallery. **Essential reading:** • Selina Hurley & Natasha McEnroe, eds., *The Medicine Cabinet: The Story of Health & Disease Told Through Extraordinary Objects'* (London: Science Museum, 2019), pp. 235, 243, 247, 144 & 152. • Oisin Wall, 'Hearing Distant Voices', in Natasha McEnroe, ed, *Medicine: An Imperfect Science* (London: Scala, 2019), pp. 146-155 • Larsen, Frances, An Infinity of Things: How Sir Henry Wellcome Collected the World (Oxford: Oxford University Press, 2009), pp. 1-26 • Julie Anderson and Lisa O'Sullivan, 'Histories of Disability and Medicine: Reconciling Historical Narratives and Contemporary Values', in Richard Sandell, Jocelyn Dodd, Rosemarie Garland-Thomson, eds., *Re-Presenting Disability, Activism and Agency in the Museum* (Abingdon: Routledge, 2010), pp. 143-154 **Background reading:** • Bud, Robert, 'Medicine at the Science Museum', in Past, Present and Future ed. by Samuel JMM Alberti and Elizabeth Hallam (London: The Royal College of Surgeons England, 2013), pp. 60-73 • Hallam, Elizabeth and Samuel JMM Albert, 'Bodies in Museums', in Medical Museums: Past, Present and Future ed. By Samuel JMM Alberti and Elizabeth Hallam (London: The Royal College of Surgeons England, 2013), pp.1-15

Course expectations
Students on this course will be expected to attend and participate in all classes (at the Science Museum); to take part in a joint assessed presentation, to read at least the essential reading, and in their area of special interest leading to their assessment, undertake the background reading too.

Additional information
The course is taught at the Science Museum, all starting at 165 Queens Gate, London SW7 5HD.
https://goo.gl/maps/serrBNWN6K72

Important policy information

Details of college and departmental policies relating to modules and assessments can be found in the STS Student Handbook https://www.ucl.ac.uk/sts/study/sts-student-handbook/sts-student-handbook

All students taking modules in the STS department are expected to read these policies.