IMPERIAL
Centre for Languages,
Culture and Communication

Teaching history of science, medicine and technology in a STEM university context.

Dr Jennifer Wallis & Dr Michael Weatherburn (Imperial)

8-10 July 2025

BSHS
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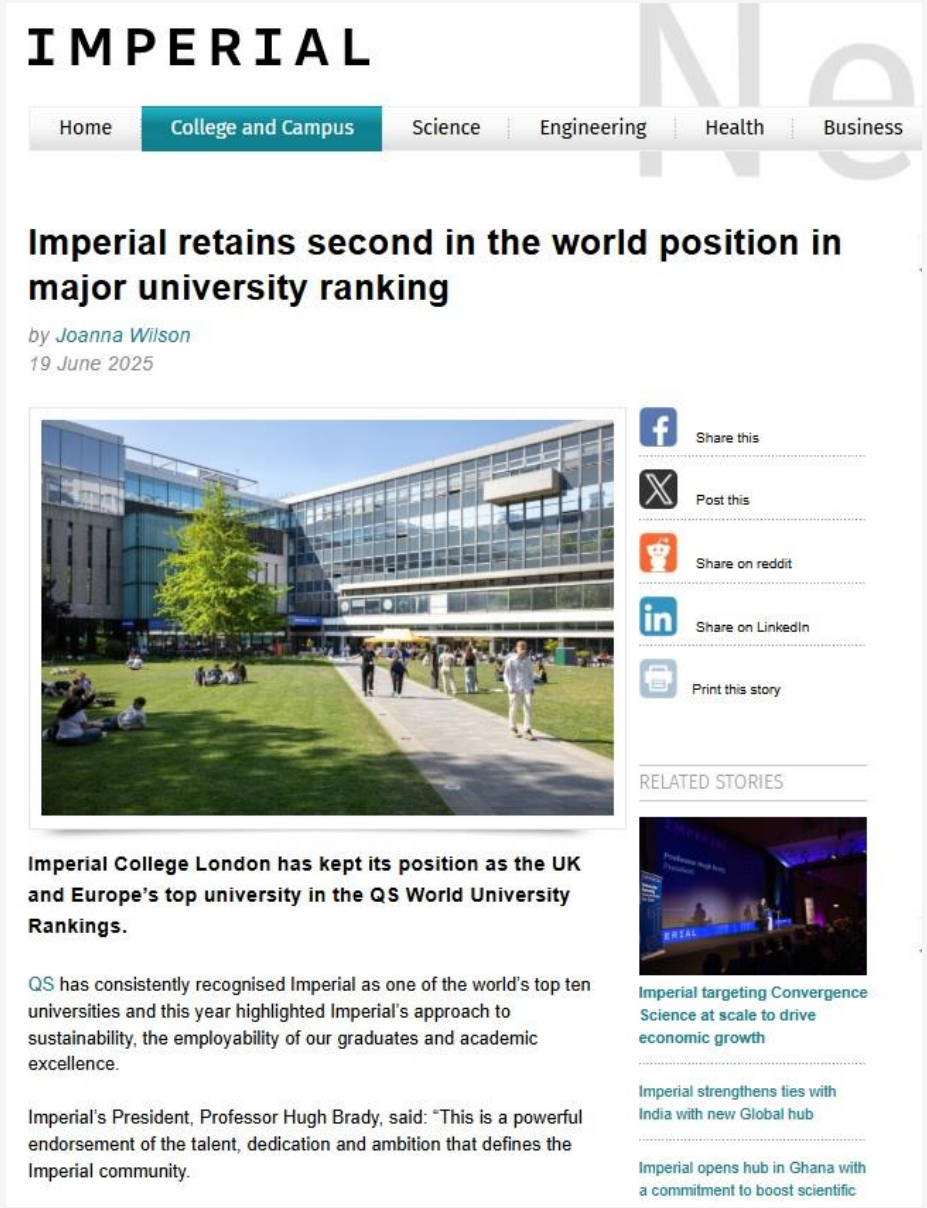
Situating STEM higher education globally.



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Imperial retains second in the world position in major university ranking

by Joanna Wilson
19 June 2025

Imperial College London has kept its position as the UK and Europe's top university in the QS World University Rankings.

QS has consistently recognised Imperial as one of the world's top ten universities and this year highlighted Imperial's approach to sustainability, the employability of our graduates and academic excellence.

Imperial's President, Professor Hugh Brady, said: "This is a powerful endorsement of the talent, dedication and ambition that defines the Imperial community.

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Situating humanities teaching in STEM higher education globally (research by Dr Igor Baranov, Imperial).

Stanford University

- Civil, Liberal, and Global Education Requirement
  - 2 courses
- Ways of Thinking/Ways of Doing Requirement
  - 11 courses, at least half can be classified as HSSA
- Writing and Rhetoric Requirement
- Language Requirement

ETH

- Science in Perspective Requirement
  - 6 credits (30 hrs workload each) at undergrad programmes
  - 1 course in Humanities, Social and Political Sciences should be taken by all master students
- 100+ courses to develop new perspectives on STEM issues, such as the historical, moral, legal, economic and political contexts

MIT

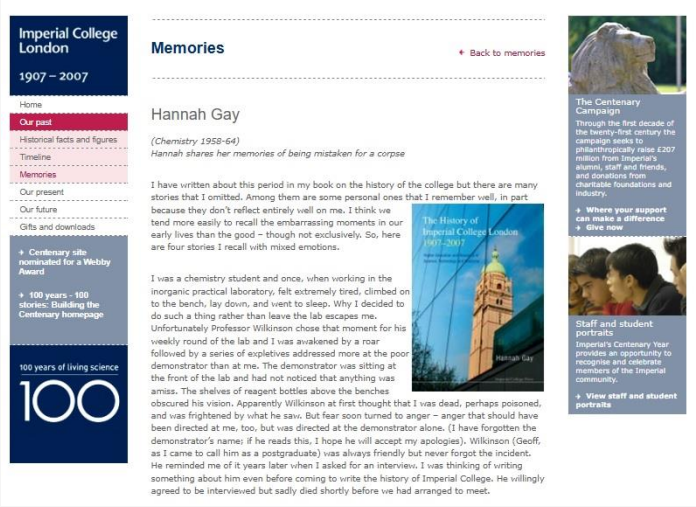
- Humanities, Arts, and Social Sciences Requirement
- 8 courses, including
  - At least 1 course in each area
  - 3-4 courses in selected HASS concentration
  - 1-2 electives

香港科技大學 THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

- Broadening Requirement
  - 12 credits (40-50 hrs workload each), including courses in Arts, Humanities, and Social Analysis
- Foundations Requirement
  - 12 credits for 2 courses in cognitive and behavioural foundations of university education and 2 courses in English and Chinese communications

Imperial is increasingly aware of its heritage and history.

- Official centenary history (1907-2007)
- Humanities at 70 celebration (2020)
- Imperial History Group/Dialogue (2021-)
  - Renamed buildings
  - Renamed prizes
  - Kickstarted new heritage and cultural initiatives
- Renamed Central Library as Abdus Salam Library (2023)
- Increasingly deploying ‘rhetorical history’ (Suddaby et al, 2023): e.g. ‘Our founding mission is “To Be Useful”.’

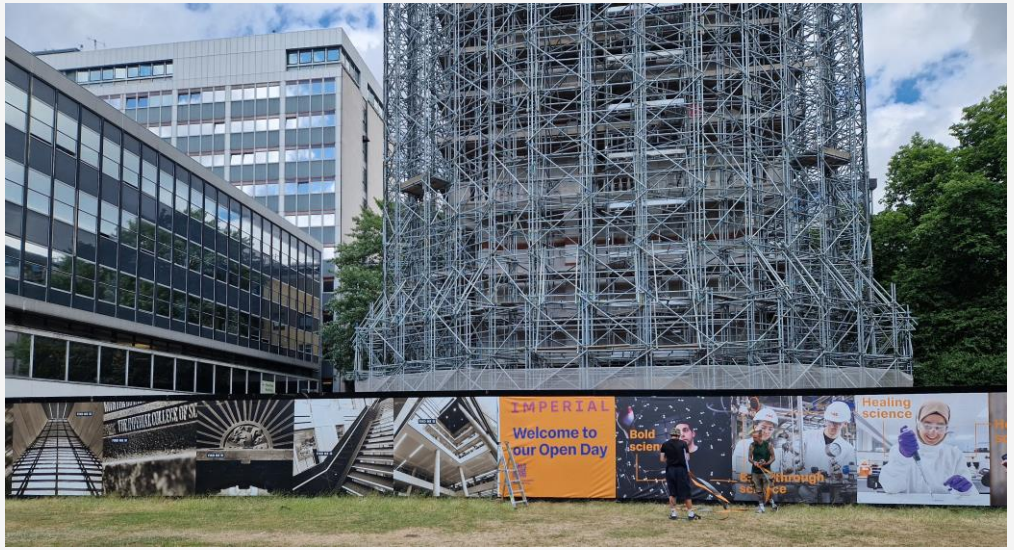


Imperial is increasingly aware of its heritage and history.

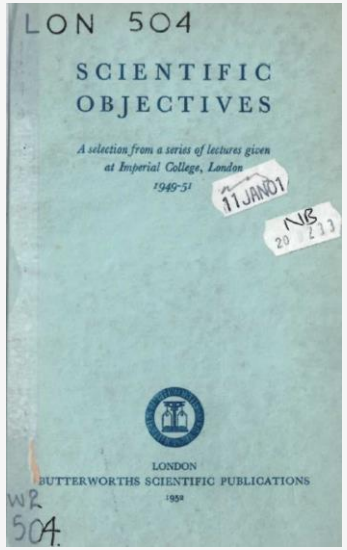
Nice summary here:
https://www.imperial.ac.uk/Stories/take-a-closer-look/

Material culture:

- Technological artefacts distributed around campus (e.g. Spitfire engine, Victorian clocks).
- Small exhibits and departmental museums (e.g. Royal School of Mines)
- Entrance archival display (documents, alumni stories)
- Statues and monuments: Einstein, Queen Victoria, Dangoor Plaza, Dalby Court, within Queen's Tower.
- Campus roads and passageways named (e.g. 'H.G. Wells Way')



Timeline of humanities teaching at Imperial



1925-6 Acland humanities essay prize founded.

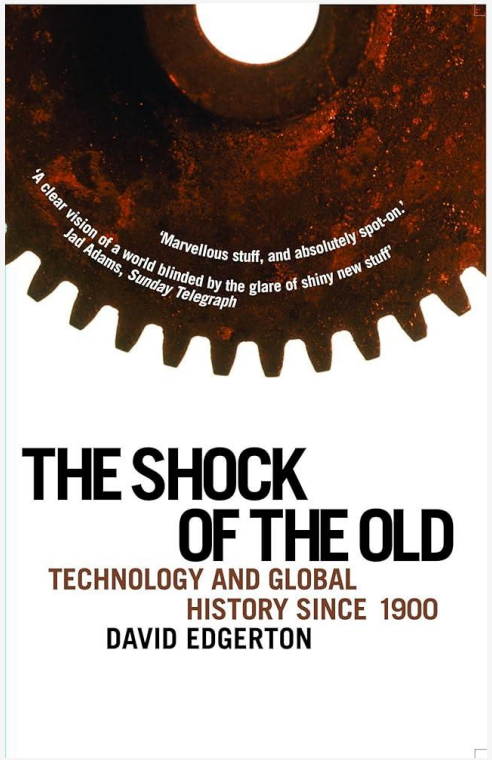
Late 1940s – Scientific Objectives lectures in response to nuclear weapons (to make scientists more aware of consequences of their work)

1950s-70s Touchstone weekends at Sillwood campus.

1963 – history becomes institutionalised at Imperial. Interestingly, no modern historians employed as this counted as science rather than history (Edgerton, 2023).

1980-90s – industrial sociology develops into management school, then Imperial Business School (2003).

CHOSTM at Imperial



Centre for the History of Science, Technology and Medicine.

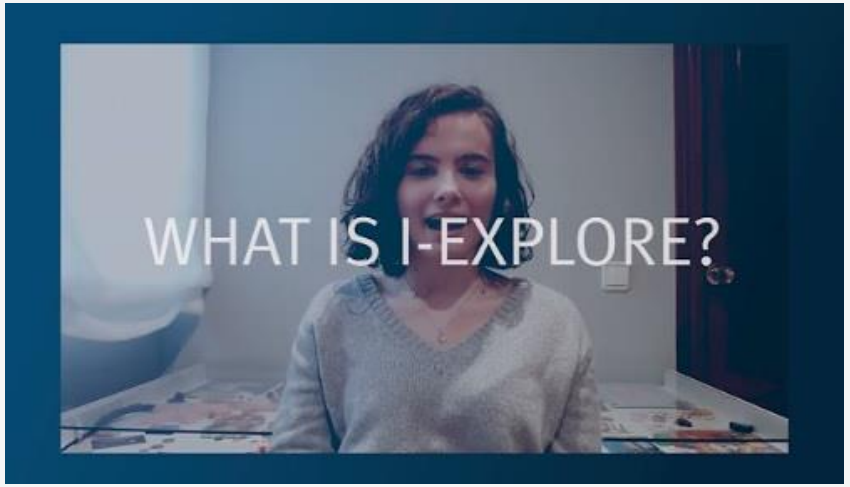
1992-2012: CHOSTM delivers teaching in lunchtime lecture format: politics, ethics, history of technology (which became *Shock of the Old*, 2006) and European history.

Formed London Centre MSc with UCL STS Department and Wellcome Centre, c1990s-2010s.

Top UK history department in REF 2008.

2012: CHOSTM relocates to KCL History Department.

Horizons/ I-Explore programme overview



Horizons, founded 2012, initially split into four fields:

- Business and Professional Skills
- Global Challenges
- Languages
- Science, Culture and Society (SCS)

In 2019: SCS absorbed BPS and rebranded as humanities and social sciences (HSS). Also Global Challenges as Changemakers.

Also 2019, I-Explore launched, including STEM, BPES and multidisciplinary projects. I-Explore now includes all Imperial undergraduates as part of their degree.

Plus, the majority of UGs also opt-in to at least one additional Horizons option during their degree.

https://www.imperial.ac.uk/centre-for-languages-culture-and-communication/i-explore

History teaching at Imperial

Current options, all elective:

Y1: History of Science & Empire

Y1: History of Modern Medicine & the Body

Y2: Revolutions & the Making of the Modern World

Y3: History of Science, Technology, and Industry

Y3: History of Intoxication

Y2-3: Humanities Projects

Y4: Advanced Humanities Projects

Total elective history capacity c.150-200 annually.

Context of humanities teaching at Imperial

Uli Harder/Flickr

‘Albertopolis’ envisaged Exhibition Road as a cultural/educational hub

The Science Museum, Victoria & Albert Museum, and Natural History Museum all created with profits from the 1851 Great Exhibition

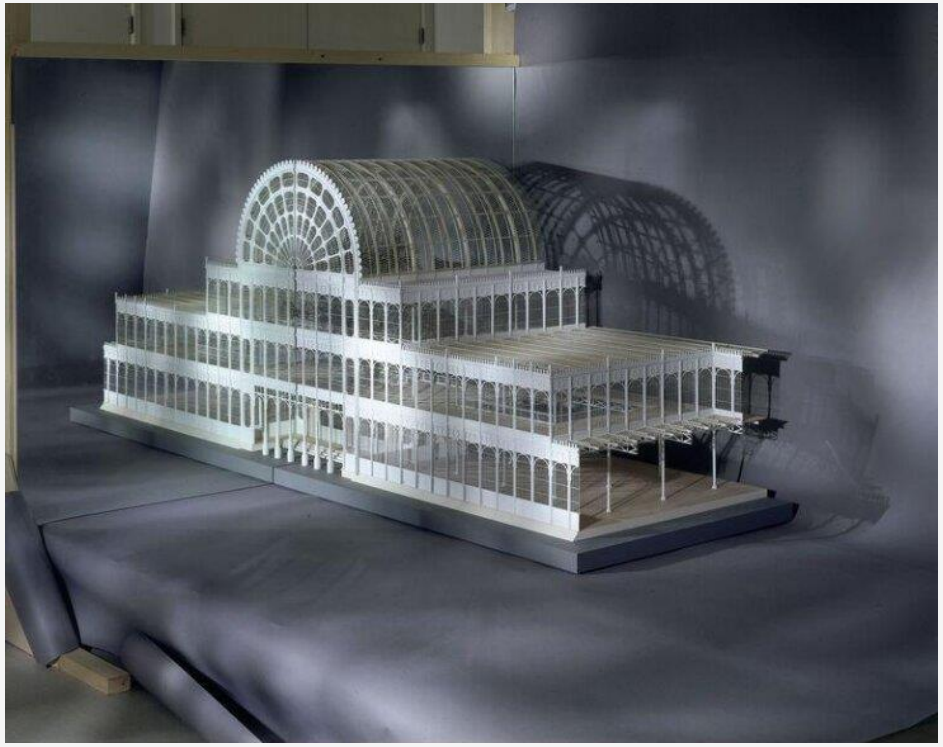
The Imperial site itself once housed a host of exhibitions about science and industry e.g. the International Fisheries Exhibition, 1883

Our neighbours include the Royal Geographical Society and Royal College of Art

Collaborations with other London institutions e.g. Chelsea Physic Garden

Informal clubs, e.g. Imperial Classic Cars Club, History Society, Medical Humanities Society

Education case study 1



Richard Armiger/V&A Museums

History of Science & Empire (Year 1): a long-running module, recently redesigned to anchor each week's topic to an object: maps, the Crystal Palace, machine guns, skulls, tonic water, taxidermy, rice, the mask of Tutankhamun.

Hands-on wherever possible e.g. tonic water tasting.

The Crystal Palace week begins with a visit to the V&A 19th Century galleries to see a model of the Palace, original exhibits, and plans.

Students then consider the engineering challenges of the Palace back in the classroom.

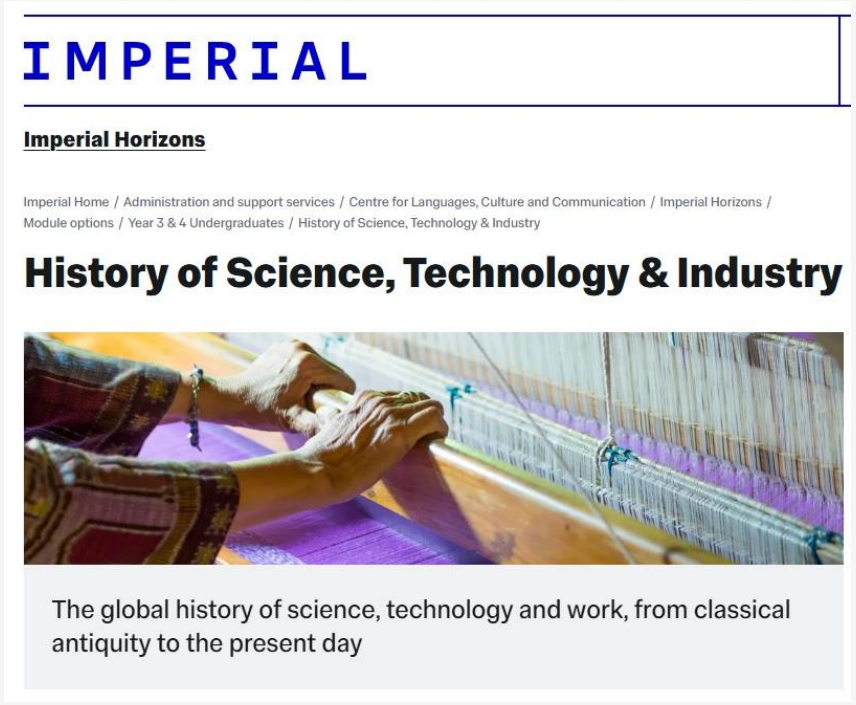
One assessment involves writing a label for an object.

Education case study 2

Year 3/4 elective History of Science, Technology and Industry module. C.30-35 students per class.

Formative exercise example:

- Student historical discovery.
- Monumentalism exercise using Imperial campus.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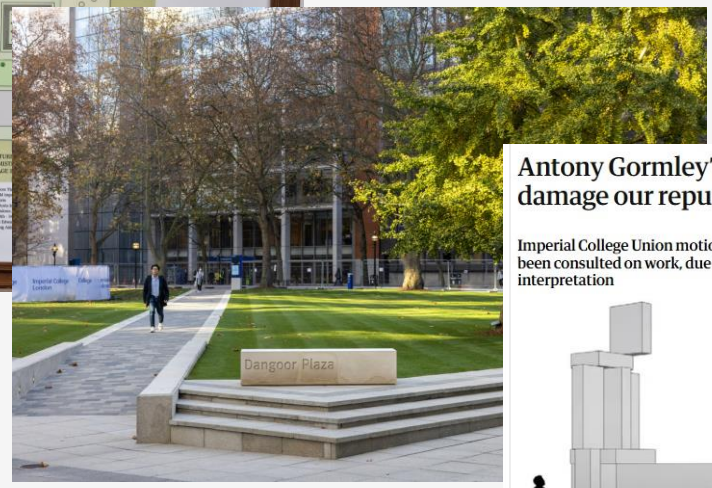
History of Science, Technology & Industry

The global history of science, technology and work, from classical antiquity to the present day



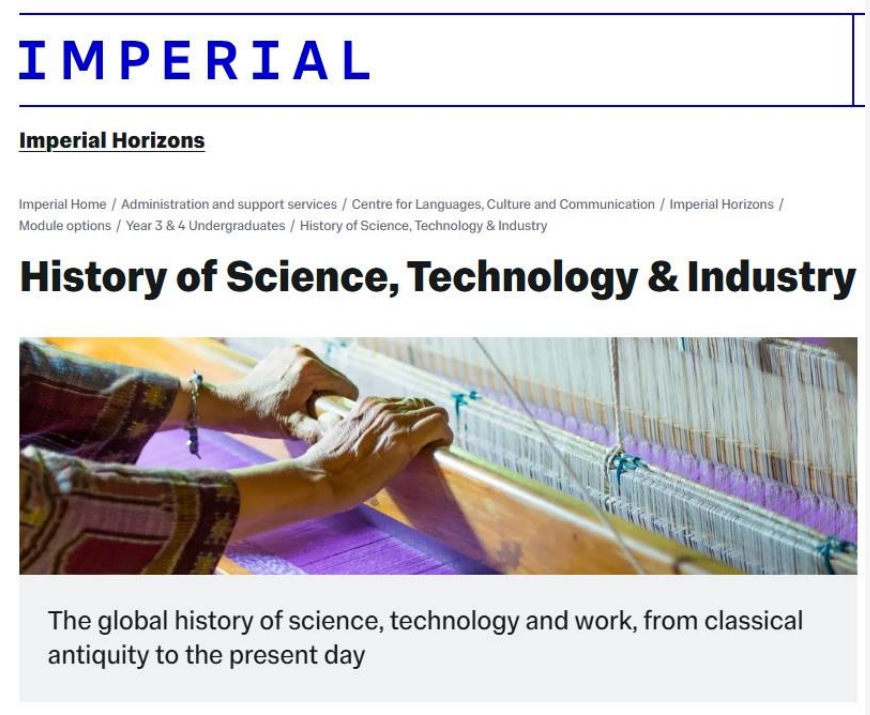
Antony Gormley's 'phallic' statue may damage our reputation, say students

Imperial College Union motion says students should have been consulted on work, due to 'obvious' erect penis interpretation

The sculpture is meant to resemble a squatting human figure.

University students at Imperial College London are battling to prevent the installation of new sculpture by Antony Gormley over concerns that the work is "phallic".

Education case study 2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History of Science, Technology & Industry

The global history of science, technology and work, from classical antiquity to the present day

Year 3/4 elective History of Science, Technology and Industry module. C.30-35 students per class.

Summative assessment example.

1st assignment chosen from set questions list at end of Term 1 (note AI issues).

Term 2 shapes up individual project ideas across five weeks of exercises, followed by a class presentation and feedback. Then, students prepare final 1500-2000 word essays.

This year's A+ examples:

- Impact of alchemy on scientific revolution.
- Enlightenment debate on infinitesimals.
- Eugenics in New Zealand.
- C20th music tech impact on music composition.

BSc Humanities

Clara Canning-Jones

BSc Medical Sciences with Humanities, Philosophy & Law: a year-long course in Year 4, for both Imperial and visiting students (c.25 in total)

Core teaching (history of medicine, narrative medicine, etc.) is supplemented with guest artist workshops: graphic novels, life drawing, acting…

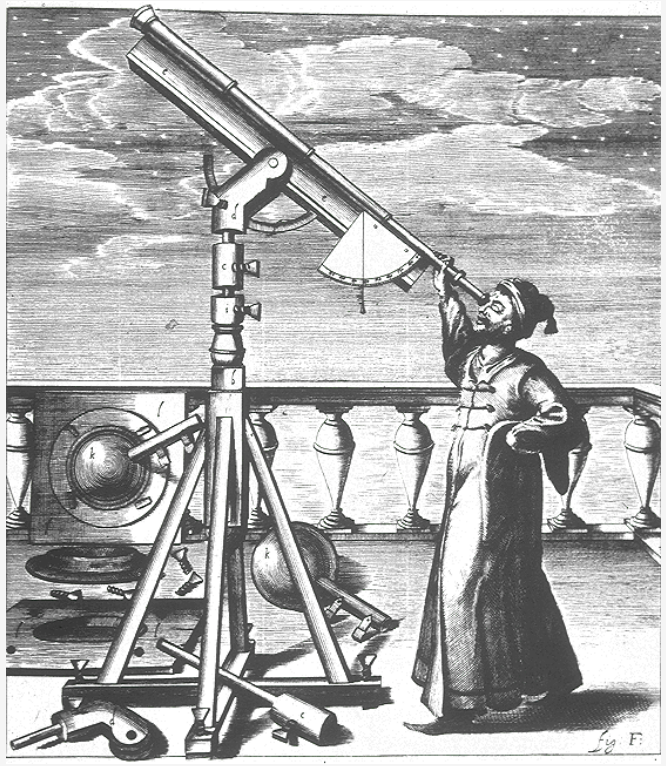
Workshops are directly applicable to assessments (posters, verbal presentations, podcasts, visual narratives). The dissertation project includes an un-assessed art piece.

BSc Humanities

"Even the most hardened humanities-sceptic medical educators cannot argue in good faith that medicine exists in a vacuum of objective, black and white, facts, separated from the grays of society, its people and their problems. For us, [the humanities] provide an opportunity to look at these gray areas, and a framework for studying them carefully."

(Olding et al, 'Black, White and Gray: Student Perspectives on Medical Humanities and Medical Education', *Teaching and Learning in Medicine*, 2022)

Future ambitions



1. Acland essay prize centenary, AY 2025-26. See: https://www.imperial.ac.uk/centre-for-languages-culture-and-communication/history/the-acland-prizes

2. Humanities & Arts Special Interest Group.

3. Alumni shapers
- Aims to reveal the hidden value of humanities, social science, arts and languages education in a STEM context.
- Research publication submitted.

4. Enhancing student belonging using history.

5. The challenges facing humanities scholars teaching in medical schools is a core concern of the new Network for Medical Humanities Scholars Teaching in Medical Schools (JISC: TEACHMEDHUMS).

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