

Material Culture in the History of Physics

V. International Seminar funded by the Wilhelm and Else Heraeus Foundation

Deutsches Museum Munich, February 26th - March 3rd 2023

What is 'material culture'?

Usually historians work in archives with historical documents trying to reconstruct theories or the social and cultural context of physics. However, not everything about physics' history is passed on in textual form: objects and architecture contain much information about the production of scientific knowledge. Therefore, we try to access new levels of insights into the history of physics by analyzing scientific instruments. Material aspects of science in the historical narrative can greatly enrich our knowledge about the way science works. This seminar introduces standard approaches to analyzing unknown objects as well as practical work at the Deutsches Museum.

Structure and Content of the Seminar

The seminar has three sections: a theoretical part, a practical section, and individual follow-up work.

Theoretical Section (Workload 130h)

In this first section, students will explore the theoretical concepts of instrument studies that form the basis of our seminar: The Winterthur model, the biography of objects, and experimental history of physics. Organized in groups, students acquire themselves knowledge on one theoretical approach and prepare presentations of their findings. These presentations will be discussed on the first day of the attendance section at the Deutsches Museum in Munich

Practical Section (Workload 40h)

The practical part of the seminar requires one week of attendance at the Deutsches Museum in Munich. During this week, we will intensively work with different material objects from the holdings of the Deutsches Museum. Different sessions cover practical activities towards experimental history of science as well as visits to the restoration workshop of the Deutsches Museum. The new exhibitions of the Museum will be examined and discussed concerning different display concepts. At the end of the seminar the participants will explore an unknown object using the Winterthur model at first, and then going on to write a biography of the object, which forms the essay that serves as examination.

Follow-Up Section (Workload 130h)

In the follow-up of the seminar, the students reflect on the experiences they made during the seminar. Therefore, they write a biography of one of the objects they investigated in Munich.

Details

- Who can apply? Master and graduate students of the following fields: History of Science, Physics, Didactics of Physics, as well as trainees in science museums. A strong historical interest is a prerequisite for consideration.
- Location: The seminar includes an online component at the beginning and attendance section at the Deutsches Museum in Munich.
- Dates: The online section starts on 15th January 2023, and the attendance section in Munich extends five days from 26th February to 3rd March 2023.
- ECTS and Workload: The workload is 300h, which means that students earn 10 ECTS in the case of a successful participation. They will get a certificate, which allows the transfer of credits to their home university.
- Modul examination: The module examination is an individual essay with 25.000 – 30.000 characters. The essay is due 15th July.
- How to apply? Please send a short CV (up to one page) and a letter explaining why you want to take part in the workshop (up to one page) in one PDF file to j.bloemer@deutsches-museum.de before **9th December 2022**.
- Funding: The support of the Heraeus foundation covers accommodation (five nights) at the Kerschensteiner Kolleg in Munich, as well as travel expenses up to 80€ for participants from Germany, up to 300 € for students from Europe, and up to 1000€ for students from overseas.

Lecturers

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