

HUM-466

**Experimental history of science II**

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Cursus	Sem.	Type
Humanities and Social Sciences	MA2	Obl.

Language of teaching	English
Credits	3
Withdrawal	Unauthorized
Session	Summer
Semester	Spring
Exam	During the semester
Workload	90h
Weeks	14
<b>Hours</b>	<b>3 weekly</b>
Project	3 weekly
<b>Number of positions</b>	<b>30</b>

**It is not allowed to withdraw from this subject after the registration deadline.**

**Remark**

Une seule inscription à un cours SHS+MGT autorisée. En cas d'inscriptions multiples elles seront toutes supprimées sans notification.

**Summary**

This course will introduce students to recent works and advancements in the history of science which will provide them with the necessary background to articulate historical questions and to understand the role played by material objects and tacit, technical skills in the production of knowledge.

**Content**

The Spring semester is devoted to the practical realization of the students' projects. Students are expected to work autonomously in the various laboratories and workshops necessary for their projects. For further advice and directions, professors will be available on demand during the weekly dedicated hours.

**Keywords**

re-enactment, past experiments, learning by doing, history of science, practices, artefacts, tacit knowledge

**POLY-perspective :**

- creative perspective
- interdisciplinary perspective

<https://www.epfl.ch/schools/cdh/cdhs-vision/>

**Learning Prerequisites****Required courses**

HUM-402: Experimental history of science I

**Learning Outcomes**

By the end of the course, the student must be able to:

- Identify important research questions in the history of science.
- Formulate a problematic and hypothesis.

- Analyze historical sources.
- Interpret historical artefacts.
- Assess / Evaluate the tacit and technical skills involved in the production of knowledge.
- Critique historical accounts and their own scientific skills.
- Construct an argument.

### Transversal skills

- Communicate effectively with professionals from other disciplines.
- Assess progress against the plan, and adapt the plan as appropriate.
- Access and evaluate appropriate sources of information.

### Teaching methods

The course relies on the teaching method of “learning by doing”. We consider this to be a particularly appropriate method for imparting knowledge about the history of science.

Spring semester: group work under lecturers’ supervision.

### Expected student activities

The Spring semester is dedicated to autonomous practical work. Students are expected to present orally the advancement of their project during a mid-semester session. At the end of the semester, students are expected to present their research and hand a final report on their activities and findings (6 to 8,000 words).

### Assessment methods

Independent evaluation at the end of both the autumn and spring term (grade associated to 3 ECTS).

Spring term:

- Mid-semester oral presentation (15%)
- Final oral presentation (25%)
- Final written report (6 to 8,000 words) (60%)

All work can be presented in either English or French.

### Supervision

Office hours	Yes
Assistants	No
Forum	Yes
Others	Weekly meetings with supervisor or during alternative appointments with supervisor and own group. If appropriate, exchange via email, to be confirmed with respective supervisor.

### Resources

#### Bibliography

Research articles, depend on the project to be performed. Information and skills to find the literature in the course of the autumn term. Additional bibliographical references will be put online on the Moodle of the course.

- Long, Pamela O. *Artisan/Practitioners and the Rise of the New Sciences, 1400-1600*. Corvallis: Oregon State University Press, 2011.

- Polanyi, Michael. *The Tacit Dimension*. Chicago: University of Chicago Press, 2009.
- Fors, Hjalmar, Lawrence H. Principe, and H. Otto Sibum. "From the Library to the Laboratory and Back Again: Experiment as a Tool for Historians of Science." *Ambix*, 63(2):85-97, 2016.
- Smith, Pamela H., Amy R. W. Meyers, and Harold J. Cook, eds. *Ways of Making and Knowing: The Material Culture of Empirical Knowledge*. Ann Arbor: University of Michigan Press, 2014.

### Ressources en bibliothèque

- [Fors, Hjalmar, Lawrence H. Principe, and H. Otto Sibum. "From the Library to the Laboratory and Back Again: Experiment as a Tool for Historians of Science."](#)
- [Smith, Pamela H., Amy R. W. Meyers, and Harold J. Cook, eds. Ways of Making and Knowing: The Material Culture of Empirical Knowledge](#)
- [Long, Pamela O. Artisan/Practitioners and the Rise of the New Sciences, 1400-1600](#)
- [Polanyi, Michael. The Tacit Dimension](#)