



SUMMER SCHOOL 2022

**MATTER
PHILOSOPHY
SCIENCE and the
ARTS**

Open to
Students holding a bachelor,
Graduate students and PhD students



WHEN

27-28-29 JUNE 2022

Registration deadline: 22 June



WHERE

**University of Bologna
Department of Philosophy and Communication Studies**



To register, e-mail

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ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA
DIPARTIMENTO DI FILOSOFIA E COMUNICAZIONE



CONCEPTUAL FRAMEWORK

What is matter? And how did it change over time? How have philosophers, scientists and artisans dealt with it in different periods and cultural settings? These questions will be at the core of the Summer School, which will involve experts from various fields to talk about matter and materiality from different perspectives. Philosophers, historians of science and technology, modern scientists will be asked to discuss how matter has been conceptualized over time -- from ancient philosophy, medicine and alchemy to contemporary cosmology and neuroscience -- as well as how it has been manipulated, transformed and shaped in mutual dialogue with the theories that tried to define it. Technologies shaped objects and bodies, created artefacts, led to the discovery of new materials, chemical elements and particles. Objects, bodies, and artefacts, on the other hand, encapsulate beliefs, mirror theories, merge habits of hands and ways of thinking about the world that surrounds us. This entangled history of ideas and objects, of theories and practices will be approached in a *longue durée* perspective, with particular attention to key case-studies taken from natural philosophy, cosmology, medicine and chemistry.

Students will be stimulated to critically think about matter, but they will also be asked to take matter in their hands, to think with their hands, to manipulate materials in accordance with instructions found in ancient manuscripts, to go through early modern books and museums and finally to taste matter, or at least a specific kind of matter, namely wine.

ORGANIZERS

**Carlotta Capuccino, Matteo Martelli, Matteo Pasetti,
Paolo Savoia, Antonella Tramacere**



PROGRAMME

27 JUNE – 1st day

Matter of the Universe and the Mind

MORNING

9:30 Welcome and introduction

10.00-11:00 Ancient philosophy

Giulia Mingucci (Bergamo), *Proximate matter and remote matter: Aristotle and the «two-body problem»*

11:00 – 11:30 Coffee Break

11:30: – 12:30 Social neuroscience

Pier Francesco Ferrari (Paris), *The material bases of the empathic mind*

AFTERNOON

14:30 – 15:30 Physics and cosmology

Andrea Cimati (Bologna), *Luminous and dark matter in the universe*

15:30 – 16:00 Coffee Break

16:00 – 17:00 Modern philosophy

Guido Gherardi (Bologna), *No matter what they say: Mr. Berkeley, it's a matter of fact*



28 JUNE – 2nd day: The Book and the Body

MORNING

9:30 – 10:30 Book culture

Roberto Limonta (Bologna), *Volumen and Codex. A cultural paradigm shift between Late Antiquity and the Middle Ages*

10:30 – 11:00 Coffee break

11:00 – 12:00 History of medicine

Paolo Savoia (Bologna), *Early modern anatomies: Science, religion, gender, and the materiality of the body*



AFTERNOON

14:00 – 16:00 Hands-on session: Tinkering

Sara Ricciardi, Stefano Rini, Fabrizia Villa (Bologna), *Learning through artifacts: from children to scientists and back*

Constructionist approaches claim that learning happens more efficiently if the learner is engaged in building an artifact: a virtual or physical object. With tinkering, a constructionist practice, the strong and personal interaction with matter, objects, and phenomena stimulates deep and personal learning. When tinkering is social, a group of people works as a learning community: this makes the experience of the construction of knowledge possible while constructing a physical artifact.

This process also allows the learner to experience how the scientific community works, how knowledge emerges from different ideas, trials, and errors, and finally how the learning community itself can recognize temporary answers/knowledge. This idea of science and its mechanisms is crucial to building true scientific citizenship.

We will present a tinkering workshop where a kinetic sculpture of light will emerge from loose parts, scraps, light, translucent plastic, and reflective materials. We will also discuss the experience and the process that happened.

16:30 – 17:00 Guided tour

Paolo Cova (Bologna), *Visit to the Anatomical Theater (Archiginnasio)*

17:00 – 18:30 Library session

Franco Bacchelli (Bologna), *Exploring rare books from the collection of the Archiginnasio*



29 JUNE – 3rd day: Manipulating Matter

MORNING

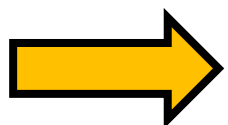
9:30 – 10:30 History of science

Marco Beretta (Bologna), *The alchemy of glass*

10:30 – 11:00 Coffee Break

11.00 – 12:00 History of science

Matteo Martelli (Bologna), *Alchemists at work: Ancient alchemy and its procedures*



AFTERNOON

14:00 – 16:30 Hands-on session in the laboratory of the Department of Chemistry
Lucia Maini, Marianna Marchini (Bologna), *Replicating ancient alchemical recipes in modern laboratories*

Students will be guided to replicate the alchemical procedures recorded in ancient alchemical handbooks and used to turn metals into gold. The texts and recipes studied in the morning will be experimentally tested and replicated. Students will not simply test whether ancient recipes actually worked, thus trying to reconstruct what ancient alchemists did in their workshops. By re-doing techniques described in ancient texts and experiencing the transformations of the treated substances, we will also discuss the different ways in which chemical practices and natural substances can be described and classified on the basis of different theoretical assumptions.

17:00 – 19:00 Hands-on session at the 'Vineria il Pollaio'
Matteo Cavalleri (Bologna), *What is wine? The materiality of a cultural relationship*

The seminar will address, both from a theoretical and an experiential point of view, some historical and cultural premises that structure the materiality inherent in the tasting of a glass of wine. After the seminar, students will be guided to taste a selection of wines (cost for the wine tasting: 25 Euros).

