

HIST GU4962  
**Making and Knowing in Early Modern Europe:  
Hands-On History**  
**Mondays 10:10am-12:00pm**

**Instructor:**

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This course is associated with the [Making and Knowing Project](#) of the [Center for Science and Society](#) at Columbia University.

## DESCRIPTION

This course introduces students to the materials, techniques, contexts, and meanings of skilled craft and artistic practices in early modern Europe (1350-1750), in order to reflect upon a series of topics, including craft knowledge and artisanal epistemology; the intersections between craft and science; and questions of historical methodology in reconstructing the material world of the past. The course will be run as a “Laboratory Seminar,” with discussions of primary and secondary materials, as well as hands-on work.

The first full-semester lab seminar to use the published edition of Fr. 640, [Secrets of Craft and Nature in Renaissance France](#)\*, as its focus, it will test the use of the Edition in a higher education classroom to inform the development of Phase II of the Making and Knowing Project - a *Research and Teaching Companion*. Students’ final projects (exploratory and experimental work in the form of digital/textual analysis of Ms. Fr. 640, reconstruction insight reports, videos for the Companion, or a combination) will be published as part of the Companion or the [Sandbox](#).

*\*Secrets of Craft and Nature in Renaissance France. A Digital Critical Edition and English Translation of BnF Ms. Fr. 640*, edited by the Making and Knowing Project, Pamela H. Smith, Naomi Rosenkranz, Tianna Helena Uchacz, Tillmann Taape, Clément Godbarge, Sophie Pitman, Jenny Boulboulé, Joel Klein, Donna Bilak, Marc Smith, and Terry Catapano (New York: the Making and Knowing Project, 2020), <https://edition640.makingandknowing.org>.

**Making and Knowing on Twitter:** You can follow the Project on Twitter [@MakingKnowing](#) and tweet any photos from your hands-on activities (we will re-tweet).

# ASSIGNMENTS AND EVALUATION

## Evaluation

The following components (described below) account for the total grade in the course:

- 15% Participation, class discussion, and contribution to Discussion Questions
- 10% Presentation on Historical Culinary Recipe Reconstruction
- 35% Weekly Field Notes (for each hands-on lab activity)
- 40% Final Project

## Assignments

- Working in pairs, prepare and present a powerpoint on your Historical Culinary Recipe Reconstruction.
- Weekly for each hands-on activity: record your field notes and reflect on hands-on activities (writing about doing and embodied activity).
- Discussion Question contribution
- Final Project

## Class Discussion and “Discussion Questions”

Each week, we will discuss a set of readings. All students are expected to come prepared for discussion, including contribution to the “Discussion Questions” documents as you do your weekly readings. These are meant to be a place where everyone can raise and puzzle through some of the issues in the readings; we use these documents to guide and supplement class discussions. Please add any points you want to raise beneath the relevant readings or add more general points in the section at the top. Feel free to make this a discussion space: comment or expand on the points of your colleagues.

## Field Notes and Hands-on Assignments

Each week, we will undertake a hands-on activity. Students should plan to spend about 5 hours/week outside of the class meetings on lab and homework, in addition to preparing for class discussion. Students will keep Field Notes (in written, visual, or podcast form) on their experiences and experiments, documenting their work. All field notes will be entered in Google Drive in the Fall 2021 Field Notes folder, and photos will be uploaded to the [photo repository](#).

## Final Project

The culmination of the semester is a Final Project. The Projects should, in some way, serve as companion pieces to the Digital Critical Edition, *Secrets of Craft and Nature*, or form a part of the Making and Knowing Project’s *Research and Teaching Companion to Secrets of Craft and Nature*. These exploratory and experimental projects will help to brainstorm, design, and implement alternative paths by which to access the material included now in the Edition and/or provide other forms of disseminating and engaging with the themes. Unlike print publications,

open access digital publications do not have an institutional framework by which they are discovered and disseminated. It is thus important to come up with alternative paths by which the digital edition can be accessed, discovered, disseminated, and, ultimately, made sustainable through use. Throughout the semester, you will work closely with the course instructors and the Making and Knowing team to develop potential areas of exploration that you are interested in pursuing for the Final Project.

Your Final Projects will be published as part of the *Research and Teaching Companion* (RTC) or the [Sandbox](#). We will meet with each student in Week 7 to craft a Final Project in accord with these principles and the student's interests.

## READINGS

**Required to acquire** (available at Book Culture, or via Abebooks.com, amazon.com, etc.):

- Cennino Cennini, *The Craftsman's Handbook, 'Il Libro dell'Arte'*, trans. by Daniel Thompson (New York: Dover, 1960).
- Samuel Quiccheberg, *The First Treatise on Museums. Samuel Quiccheberg's Inscriptiones 1565*, trans. Mark A. Meadow and Bruce Robertson (Getty Research Institute, 2013).

**These are useful as comparison artist/artisan writings (but not required):**

- Theophilus, *The Various Arts. De Diversis Artibus*, ed. and trans. Hawthorne (Dover, 1980).
- Benvenuto Cellini, *Two Treatises*, trans. C. R. Ashbee (repr. 2006).
- Mary P. Merrifield, *Medieval and Renaissance Treatises on the Arts of Painting: Original Texts with English Translations* (Courier Dover Publications, 2012).
- Giorgio Vasari, *On Technique* (Dover, 1960).
- Karel van Mander, *The Lives of the illustrious Netherlandish and German painters, from the first edition of the Schilder-boeck* (Doornspijk: Davaco, 1994–1999).

## ACCESS TO COURSE MATERIALS

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**IMPORTANT: Complete by September 9—this is required for access to course materials**

- Please fill out the Student Information Form which will ask you for information in order to grant you access to the collaborative course files.
    - After completing this form, you will shortly (but not immediately) receive an email invitation with instructions from the Making and Knowing Project Google Account to view the Student Files folders.
    - For reference, please consult M&K GD Introduction and information on the Project Google Drive
  - Once you have received confirmation, please make sure you can view the Google Drive folder.
  - If you have any questions or problems, please contact Naomi AND Caroline.
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## SCHEDULE OVERVIEW (semester at-a-glance)

Week: Theme	Hands-on Activity	Monday Date	Notes and Assignments
			<i>Thu Sept 9 first day of classes</i>
Week 1: Introduction <b>FW513</b>	Intros	Sept 13: First day	
Week 2: Get to know <i>Secrets of Craft and Nature</i> <b>FW513</b>	Historical Culinary Reconstructions, breadmaking, verdigris	Sept 20: scavenger hunt discussion, assignments	<i>Tues Sept 21 course drop deadline</i> Access to course materials, digital protocols, and scavenger hunt
Week 3: Reconstruction of Historical Techniques <b>FW513</b>		Sept 27: HCR presentations, breadmaking progress	Begin Field Notes, prepare presentation
Week 4: Collecting Nature and Art and Intro to Final Projects <b>FW513</b>		Oct 4: Introduction to Final Projects	
Week 5: Embodied Knowledge <b>FW513</b>		Oct 11: Discussion of readings	
Week 6: Molding and Casting <b>Chandler 260</b>		Oct 18: Casting into bread molds	<i>Tues Oct 12 course withdrawal deadline. Last day to drop.</i> Bring bread molds to class
Week 7: <b>Final Projects FW513</b>	Breadmaking and molding	Oct 25: <b>Final Projects Share</b>	<i>Thurs Oct 21 midterm date</i> Final Project Ideas reports
Week 8: N/A	NO CLASS	Nov 1 - NO CLASS (academic holiday)	<i>Tues Nov 2 (university holiday)</i>
Week 9: Nature, Art, and Imitation <b>FW513</b>		Nov 8: Discussion of readings	
Week 10: Transforming Materials: Pigments and Paints <b>TBD: FW513/</b>	Pigment/lake making	Nov 15: Intro to pigments and paint	<i>Thurs Nov 18 last day to pass/fail</i> Search Ms. Fr. 640

<b>Chandler 260</b>			
Week 11: Transforming Materials: Pigments and Paints (part II) <b>Chandler 260</b>	Pigment/lake making	Nov 22: Lake making	<i>Thurs Nov 25 and Fri Nov 26 (university holidays)</i> <b>Wed Nov 24: FINAL PROJECT DRAFTS DUE</b>
Week 12: Final Project Draft Exchange <b>FW513</b>	Final Projects	Nov 29: Final Project Draft Exchange	<b>Read over all drafts and comment</b>
Week 13: Transforming Materials: Pigments and Paints (part III) <b>Chandler 260</b>	Painting (lakes and verdigris)	Dec 6: Painting pigments	<b>Prepare pigment sample card, bring in verdigris</b>
Week 14: Craft and Science <b>FW513</b>	LAST DAY OF CLASS	Dec 13: Discussion of readings	<i>Tues Dec 14 - Wed Dec 15 - STUDY DAYS</i>
		Dec 20: NO CLASS Reading week	<i>Thurs Dec 16 - Thurs Dec 23 - FINALS</i>
<b>DUE DEC 23: Final Projects must be submitted by midnight ET</b>			

## Week 1: September 13

### Introduction

#### SEPTEMBER 13: IN CLASS

- 10:10–10:30 Introductions all around  
 10:30–11 Introduction to the Making and Knowing Project  
 11–11:30 Introduction to Field Notes and Digital Protocols
- 2021 Digital Protocol Resource Page
- Permission/contribution forms
- 11:30-12pm Move to Chandler 260: Tour of the Lab

#### FOLLOW UP: Week 1 & PREPARATION: Week 2

If you have not done so already, complete the tasks in Accessing Course Materials (above).

- For quick reference: 2021 resources introduction - READ ME
- Consult M&K GD Introduction and information on the Project Google Drive
- Once you have access to the collaborative files, begin exploring the resources that will be discussed next week
  - All Field Notes are kept in the Google Drive Folder, Fall 2021 Field Notes (make sure you are accessing with your @gmail.com account)
  - 2021 Field Notes Checklist

- Review the information about our Flickr account and protocols: 2021 Digital Protocol Resource Page
- Sign in to [Flickr](#) to make sure you have access (this is where you will eventually upload your photos and videos)

## Week 2: September 20

### Get to know *Secrets of Craft and Nature*

#### REQUIRED READING/ACTIVITY

##### Required Reading and Viewing:

- Pamela H. Smith, “Making the Edition,” In *Secrets of Craft and Nature in Renaissance France. A Digital Critical Edition and English Translation of BnF Ms. Fr. 640*, edited by Making and Knowing Project et al. (New York: Making and Knowing Project, 2020), [https://edition640.makingandknowing.org/#/essays/ann\\_329\\_ie\\_19](https://edition640.makingandknowing.org/#/essays/ann_329_ie_19).
  - Be sure to watch the short videos embedded in the essay.
- Pamela H. Smith, “An Introduction to Ms. Fr. 640 and its Author-Practitioner.” In *Secrets of Craft and Nature in Renaissance France*, [https://edition640.makingandknowing.org/#/essays/ann\\_300\\_ie\\_19](https://edition640.makingandknowing.org/#/essays/ann_300_ie_19).
- Colin Debuiche and Sarah Muñoz, “Ms. Fr. 640: The Toulouse Context,” translated by Philippe Barré and Christine Julliot de la Morandière, in *Secrets of Craft and Nature in Renaissance France*, [https://edition640.makingandknowing.org/#/essays/ann\\_336\\_ie\\_19](https://edition640.makingandknowing.org/#/essays/ann_336_ie_19).

**Contribute** any questions, thoughts, or connections stimulated by the preparatory readings and videos to the week’s Discussion Questions - Week 2 document which functions as a discussion forum and repository of ideas for both students and instructors. There will be a new document for each week’s readings.

##### Required Activity:

**Browse** *Secrets of Craft and Nature*: <https://edition640.makingandknowing.org>.

- **Explore** each menu item.
- **Complete** the following scavenger hunt of the Edition
  - Pick three of the following terms, and use the search bar to search the manuscript: “mercury,” “bread,” “rat,” “dog,” “cuttlefish,” “saliva,” “garlic,” “blood,” “rosemary,” “milk,” “horse,” “earwax”
- Browse the results and select one of the occurrences in the manuscript that you find interesting. Please note the page number (e.g., fol. 76v) and URL (e.g., <https://edition640.makingandknowing.org/#/folios/76v/f/76v/tl>) from which you viewed the recipe or entry containing the term. **Keep notes for discussion.**
  - What is the recipe for? Is it a recipe at all? If not, how would you characterize it? How is the relevant object/material/animal used in the recipe? Was this use or the material surprising to you? How does this manuscript entry relate to a subject you are interested in? Could you follow the entry’s instructions to make this object/material?

- Is there an essay associated with this entry in the manuscript (click on the beaker icon on the right of the entry)? Does it provide new insights or answer your questions about this recipe?

## SEPTEMBER 20: IN CLASS

10:10–11:15 Get into groups of three. These are your partners for today’s discussion and to work together on the Historical Culinary Reconstruction (HCR) assignment for the rest of the week.

Be ready to talk about what you found in the *Secrets of Craft and Nature* scavenger hunt.

11:15–12pm Assignments

- Assignment Sheet: Historical Culinary Recipe Reconstruction - start on this immediately - see below under Week 3 - it is **DUE ON Sept. 27**.
- Assignment Sheet: Verdigris Growing (**due Dec. 6**)
- Assignment Sheet: Bread Molding - begin baking bread (bread molds **due Oct. 18**)

Discussion of “Field Notes” and note-taking practice

2021 Field Notes Checklist

Introduction to Digital Protocols, Flickr naming and upload protocols, and how to insert images into Field Notes (to be continued next week):

- 2021 Digital Protocol Resource Page

Hand out sourdough and verdigris kit

## FOLLOW UP: Week 2

**Start immediately on the HCR with your partners** (see below)

Begin taking **Field Notes**

- All Field Notes are kept in the Google Drive Folder, Fall 2021 Field Notes (make sure you are accessing with your @gmail.com account)
- Review:
  - 2021 Field Notes Checklist
  - 2021 Field Notes Tutorial
  - Review the information about our Flickr account and protocols: 2021 Digital Protocol Resource Page
  - 2021 Flickr Tutorial\_ Uploading images + creating albums
    - Sign in to [Flickr](#) to upload your photos

**Bread making (for bread molds, due October 18)**

- Over the coming week, learn to make bread! Start as soon as possible, in tandem with your HCR prep.
- You will use this bread to prepare your bread molds for class on **October 18**
  - Familiarize yourself with the Assignment Sheet: Bread Molding.
- Start early enough that you can bake more than once—you will need to experiment (and you will want to eat some of it!)
- Remember to keep detailed Field Notes and take copious pictures as you learn to bake.
- You will need to research the ingredients and process of making sixteenth-century bread.

- **Due October 11: Informal verbal reports on your experience of bread making.**

### Verdigris growing (for painting, due Dec 6)

- Review the Assignment Sheet: Verdigris Growing
- Begin growing your verdigris as detailed in the assignment sheet.
- Remember to keep detailed Field Notes and take pictures as it begins to grow.

## Week 3: September 27

### Reconstruction of Historical Techniques

#### REQUIRED READING/ACTIVITY

- Start immediately on the HCR with your partner by carefully reviewing the Assignment Sheet: Historical Culinary Recipe Reconstruction, exploring and using the websites listed there to search for comparable recipes in contemporaneous sources, and doing the required reading/watching BEFORE starting the reconstruction:
  - [CU Library Tool](#) compiled by librarian Meredith Levin.
  - Ken Albala, “Cooking as Research Methodology: Experiments in Renaissance Cuisine,” *Renaissance Food from Rabelais to Shakespeare: Culinary Readings and Culinary Histories*, ed. Joan Fitzpatrick (Aldershot, UK: Ashgate, 2010), pp. 73–88.
  - [Syrup of Violets and Science](#) video.
  - Lawrence Principe, “Chymical Exotica in the Seventeenth Century, or, How to Make the Bologna Stone” *Ambix* 63 (2016): 118-44.
  - Ad Stijnman, “Style and technique are inseparable: art t bvechnological sources and reconstructions,” *Art of the Past. Sources and Reconstructions. The proceedings of the First Symposium of the Art Technological Source Research Study Group*, ed. by Mark Clarke, Joyce H. Townsend, and Ad Stijnman (Amsterdam: Archetype, 2005): 1–8.
- Prepare a Google Slide or Powerpoint presentation of your HCR inside the personal Fall 2021 Field Notes folder belonging to a member of your group.
  - Your presentation must be 10 minutes max on September 27
  - Practice delivering the presentation so that we can keep to time in class.
- You are responsible for sourcing and purchasing your own materials. If this presents any hardship for you, please speak to us about it before you buy anything. We may be able to reimburse you for -- or purchase -- some of the materials.
  - Check the OED (*Oxford English Dictionary*) for etymological info about words, e.g., biscuits

**Contribute** any questions, thoughts, or connections stimulated by the preparatory readings and videos to the week’s Discussion Questions - Week 3 document which functions as a discussion.

#### SEPTEMBER 27: IN CLASS

- 10:10–11:15 Google Slide Presentations of HCR process and results
- 11:15–12pm Commentary on the results (and consumption, if possible and safe to do)  
 Discussion of progress on bread making  
 Field Notes, Flickr, and Digital Protocol review and questions:
  - Review 2021 Digital Protocol Resource Page



- Step-by-step: 2021 Flickr Tutorial\_ Uploading images + creating albums

### **FOLLOW UP: Week 3**

- Continue your Field Notes
- **Due October 18:** Breadmolding - Assignment Sheet: Bread Molding
  - Keep baking bread!
  - Choose an object to press into the bread to create a breadmold.
  - Prepare your breadmolds for October 18. Be ready to show your molds and to begin the casting process in class.
  - Think about your setup, workflow, and materials:
    - How to undertake hands-on work in a thoughtful and safe way?
  - Take a look at Assignment Sheet: Final Projects

## **Week 4: October 4**

### **Collecting Nature and Art**

#### **REQUIRED READING/ACTIVITY**

##### **Required reading for discussion**

- For discussion questions, see the Discussion Questions - Week 4 document.
- Samuel Quiccheberg, *The First Treatise on Museums. Samuel Quiccheberg's Inscriptiones 1565*, trans. Mark A. Meadow and Bruce Robertson (Getty Research Institute, 2013).
- Colin Debuiche, "Ms. Fr. 640 and the Béthune Collection," translated by Christine Julliot de la Morandière and Philippe Barré, in *Secrets of Craft and Nature in Renaissance France*, [https://edition640.makingandknowing.org/#/essays/ann\\_337\\_ie\\_19](https://edition640.makingandknowing.org/#/essays/ann_337_ie_19).

##### **Optional further reading**

- Pamela H. Smith, "Collecting Nature and Art: Artisans and Knowledge in the Kunstkammer," in *Engaging With Nature: Essays on the Natural World in Medieval and Early Modern Europe*, ed. Barbara Hannawalt and Lisa Kiser (University of Notre Dame Press, 2008), 115-136.
- Martin Kemp, "'Wrought by No Artist's Hand': The Natural, the Artificial, the Exotic, and the Scientific in Some Artifacts from the Renaissance," *Reframing the Renaissance: Visual Culture in Europe and Latin America 1450–1650*, ed. Claire Farago (New Haven and London: Yale University Press, 1995), 177–96.

**See the Discussion questions** in the Discussion Questions - Week 4 document. **Contribute** your comments.

#### **OCTOBER 4: IN CLASS**

10:10–11:30 Discussion of readings

11:30–12pm Intro to Final Projects (with special guest, Terry Catapano, M&K Digital Lead)

- Assignment Sheet: Final Projects
- Look at the [Sandbox](#)

- Decide on groups (for those of you who plan to work in groups).

## **FOLLOW UP: Week 4**

- Continue your Field Notes, completing or cleaning up the ones from the previous weeks.
- Begin contemplating ideas for your Final Project
- **Due October 18:** Breadmolding - Assignment Sheet: Bread Molding
  - Keep baking bread!
  - Choose an object to press into the bread to create a breadmold.

## **Week 5: October 11**

### **Embodied Knowledge**

#### **REQUIRED READING/ACTIVITY**

##### **Required reading:**

- Tillmann Taape, “The Body and the Senses in Ms. Fr. 640: Towards a ‘Material Sensorium,’” in *Secrets of Craft and Nature in Renaissance France*, [http://edition640.makingandknowing.org/#/essays/ann\\_302\\_ie\\_19](http://edition640.makingandknowing.org/#/essays/ann_302_ie_19).
- Emma Le Pouésard, “Pain, Ostie, Rostie: Bread in Early Modern Europe,” in *Secrets of Craft and Nature in Renaissance France*, [http://edition640.makingandknowing.org/#/essays/ann\\_046\\_fa\\_16](http://edition640.makingandknowing.org/#/essays/ann_046_fa_16).
- Emma Le Pouésard, “Bread as Mediating Material: Tactile Memory and Touch in Ms. Fr. 640,” in *Secrets of Craft and Nature in Renaissance France*, [https://edition640.makingandknowing.org/#/essays/ann\\_050\\_fa\\_16](https://edition640.makingandknowing.org/#/essays/ann_050_fa_16).
- Ann-Sophie Lehmann, “Wedging, Throwing, Dipping and Dragging – How Motions, Tools and Materials Make Art,” *Folded Stones*, eds. Barbara Baert and Trees de Mits (Institute for Practice-based Research in the Arts: Ghent 2009), pp. 41-60.
- Raymond Tallis, “Grasping the Hand,” in *The Hand: A Philosophical Inquiry into Human Being* (Edinburgh: Edinburgh University Press, 2003), 21–43

##### **Optional further reading:**

- Erin O’Connor, “Embodied knowledge in glassblowing: the experience of meaning and the struggle towards proficiency,” *Sociological Review* (2007): 126-141.
- Julian Thomas, “Phenomenology and Material Culture,” in *Handbook of Material Culture*, ed. Christopher Tilley et al. (Sage 2006), 43-59.
- Tim Ingold, *The Perception of the Environment: Essays in Livelihood, Dwelling and Skill* (London and New York: Routledge, 2000), chs. 18-19 (pp. 339-361).

**Contribute** to the Discussion Questions - Week 5 document.

## **OCTOBER 11: IN CLASS**

10:10–11:35 Discussion of the readings.

- How did the readings help you to think about the experience of kneading, rising, and baking bread? Or vice versa?

- Be ready to talk about your failures and any interesting insights from your failures, as well as any other observations about the experiences.

11:35–12pm Presentation by Environmental Health & Safety

- Review your own workflows and safety procedures
- How to undertake hands-on work in a thoughtful and safe way?
- Reflect on your reconstruction process and think about the materials, tools, and protocols you utilized.
- Safety Resources
  - M&K has laboratory/studio safety protocols. What are the underlying principles? How do these compare to working at home?
  - Look at: Workflow and Safety Protocol Template\_NJR
  - Look at: TEMPLATE\_MSDS Worksheet
    - How to read an MSDS sheet using the example of vinegar

### **FOLLOW UP: Week 5**

- Continue developing ideas for your Final Project
- Continue your Field Notes
- Sign up for casting session in the lab
- **Reminder for October 18:** Have your bread molds ready to be cast into
  - Assignment Sheet: Bread Molding
  - Think about the setup, workflow, and materials for casting into the molds:
    - How to undertake hands-on work in a thoughtful and safe way?
    - Safety Resources - look at the
      - Workflow and Safety Protocol Template\_NJR

## **Week 6: October 18**

### **Molding and Casting**

#### **REQUIRED READING/ACTIVITY**

**Reminder for October 18:** Bring your bread molds to class, ready to be cast into.

- How do your bread molds and your cast objects show traces of your process (successes, failure)? How do we read them as objects?

#### **OCTOBER 18: IN CLASS - MEET IN CHANDLER 260**

Sign up for a casting session

### **FOLLOW UP: Week 6**

- Finalize your topic for your Final Project
  - Prepare to report on your plans next week (Oct. 25)
- Continue your Field Notes

## Week 7: October 25

### Final Project Preparation

#### OCTOBER 25: IN CLASS

10:10–12 Share ideas on Final Project topics with the class  
Assignment Sheet: Final Projects

#### FOLLOW UP: Week 7

- Begin researching/writing towards a draft of your Final Project, draft **due Wed Nov. 24**
- Continue your Field Notes

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### Week 8: November 1

No Class

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### Week 9: November 8

#### Nature, Art, and Imitation

#### REQUIRED READING/ACTIVITY

##### Required Reading:

- Selections of your choice from Cennino Cennini, *The Craftsman's Handbook*, 'Il Libro dell'Arte', trans. by Daniel Thompson (New York: Dover, 1960).
  - **Choose** your favorite couple of chapters and read for specific things, e.g. language, how instructions are given, materials and how they are transformed, etc., making note of what you find in the Discussion Questions document
  - How does Cennini's book of recipes compare to Ms. Fr. 640? How does it compare to Quiccheberg's plan for a collection?
  - Can you find any of the materials in Ms. Fr. 640 (e.g., those you found in your scavenger hunt) in Cennini?
- **PLEASE NOTE:** this essay contains images and descriptions of preparing dead animals for taxidermy - it may be disturbing to some: Divya Anantharaman and Pamela H. Smith. "[Animals Dried in an Oven](#)." In *Secrets of Craft and Nature in Renaissance France. A Digital Critical Edition and English Translation of BnF Ms. Fr. 640*, edited by Making and Knowing Project, et al. 2020.
- Isabella Loes-Chavez. "[Imitating Raw Nature](#)." In *Secrets of Craft and Nature in Renaissance France. A Digital Critical Edition and English Translation of BnF Ms. Fr. 640*, edited by Making and Knowing Project, et al. 2020.

**Contribute** to the Discussion Questions - Week 9 document

#### NOVEMBER 8: IN CLASS

10:10–11:30 Discussion of readings

11:30–12pm Final Project check-ins and breadmold cast viewing in lab

## **FOLLOW UP: Week 9**

- Do required reading and short activity
- Continue your Field Notes - FIELD NOTES (with photos and URLs) ON ACTIVITIES COMPLETED SO FAR ARE DUE ON FRIDAY NOVEMBER 12.
  - Bread making, breadmolding, verdigris → all of these should be up to date
- Continue drafting your Final Project; **draft due on Nov 24.**

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## **Week 10: November 15**

### **Transforming Materials: Pigments and Paints**

#### **REQUIRED READING/ACTIVITY**

##### **Required reading:**

- Erma Hermens and Arie Wallert, “The Pekstok Papers, Lake Pigments, Prisons and Paint-Mills,” in *Looking through Paintings: The Study of Painting Techniques and Materials in Support of Art Historical Research (Leids Kunsthistorisch Jaarboek XI)*, ed. Erma Hermens (Baarn, The Netherlands: Uitgeverij de Prom, 1998), pp. 269-280 and 287-291.
- Search the translation for “lake,” “brazilwood,” “cochineal,” “platte,” “ronde” in Fr. 640
- **Look through** The making of lake pigments from a variety of materials
- Review these assignment sheets to prepare for the week’s activities:
  - Assignment Sheet: Cochineal Lake Making
  - Assignment Sheet: Painting pigments

##### **Further Optional Reading**

- Jo Kirby et al, “Chapter 5 - Recipes,” in *Natural Colorants for Dyeing and Lake Pigments: Practical Recipes and their Historical Sources* (Archetype Publications, London, 2014).
- *Natural Colorants* Chapter 3 - Chemistry (chemistry of the lake process)
- Elena Phipps, [Cochineal\\_Red\\_the\\_art\\_history\\_of\\_a\\_color.pdf](#)

#### **NOVEMBER 15: IN CLASS**

10:10–12pm Presentation and discussion

Presentation: Introduction to Pigments & Paints

Presentation: Cochineal Lake: History, Chemistry, and Preparation

Discuss what you found in your search for “lake,” “brazilwood,” “cochineal,” “platte,” “ronde” in Fr. 640?

## **FOLLOW UP: Week 10**

- Continue your Field Notes
- Continue drafting your Final Project; **draft due on Nov 24.**
- Start preparation for the coming weeks of color making!

- Assignment Sheet: Cochineal Lake Making
  - Assignment Sheet: Painting pigments
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## Week 11: November 22

### Transforming Materials: Pigments and Paints II

#### NOVEMBER 22: IN CLASS

10:10–10:30 Making of Lake Pigment - Cochineal

10:30–12pm Lake making together in the Lab

- Assignment Sheet: Cochineal Lake Making
- Filter and wash pigment, then leave to dry
- If there is time, discuss verdigris waste stream

#### FOLLOW UP: Week 11

- Continue your Field Notes
  - **Due November 24:** Submit a draft of your final project for the Nov 29 Draft Exchange session.
    - Please submit it in the document with your name on it in the Final Project DRAFTS folder by 11:59pm on Wednesday November 24.
    - If you are not turning in a draft that can be submitted as a google doc, please let us know.
  - **Due November 29:** Read everyone's drafts and leave comments using Google Drive's commenting function. Be ready to participate in the Draft Exchange session with suggestions and thoughts for your fellow classmates.
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## Week 12: November 29

### Final Project Draft Exchange

#### NOVEMBER 29: IN CLASS

10:10–12pm Discussion of Final Project Drafts

#### FOLLOW UP: Week 12

- Continue your Field Notes
  - Continue drafting your Final Project, incorporating feedback from the Draft Exchange session
  - Review Assignment Sheet: Painting pigments
    - Prepare Sample Card for pigment painting
  - Re-read Assignment Sheet: Verdigris Growing. Taking safety precautions - using nitrile gloves, remove your verdigris and copper sheet from the jar, and bring it to class in a baggie (see assignment sheet for more details).
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## Week 13: December 6

### Transforming Materials: Pigments and Paints II to I

#### REQUIRED READING/ACTIVITY

- Reminder:
  - Bring in Sample Card
  - Bring in your verdigris

#### DECEMBER 6: IN CLASS

10:10–10:30 Last steps of lake prep (scrape pigment from filter)

10:30–12pm Demo: Mulling and painting pigments

Painting out together

*Waste management for verdigris and oils*

Assignment Sheet: Painting pigments

#### FOLLOW UP: Week 13

- Sign up for additional Lab time and/or take materials home for more painting
- Continue experimenting with painting out your pigments at home
  - Review Assignment Sheet: Painting pigments
  - Different types of pigments (organic- cochineal, mineral - verdigris, earth - ochre)
  - Different types of binding media (oil, gum, tempera - egg yolk, glair - egg white)
  - What other types of trials can you do? Painting out a scene? Trying substrates other than paper? Mixing or layering pigments?
- Complete Field Notes
- Continue drafting your Final Project

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## Week 14: December 13

### Craft and Science

#### REQUIRED READING/ACTIVITY

##### Required Reading

- REMINDER: bring your pigment cards to class
- William Eamon and Françoise Paheau, “The Accademia Segreta of Girolamo Ruscelli: A Sixteenth-Century Italian Scientific Society,” *Isis* 75, no. 2 (1984): 327-42.
- Tillmann Taape, “Experience Will Teach You!: Recording, Testing, Knowing, and the Language of Experience in Ms. Fr. 640.” In *Secrets of Craft and Nature in Renaissance France. A Digital Critical Edition and English Translation of BnF Ms. Fr. 640*, edited by Making and Knowing Project, et al.  
[https://edition640.makingandknowing.org/#/essays/ann\\_303\\_ie\\_19](https://edition640.makingandknowing.org/#/essays/ann_303_ie_19).
- Vera Keller, “Everything Depends Upon the Trial (*Le tout gist à l’essay*): Four Manuscripts Between the Recipe and the Experimental Essay.” In *Secrets of Craft and Nature in Renaissance France. A Digital Critical Edition and English Translation of BnF*

*Ms. Fr. 640*, edited by Making and Knowing Project, et al,  
[https://edition640.makingandknowing.org/#/essays/ann\\_320\\_ie\\_19](https://edition640.makingandknowing.org/#/essays/ann_320_ie_19).

### Further Optional Reading

- Pamela O. Long, *Artisan Practitioners and the Rise of the New Sciences, 1400-1600* (Oregon State UP, 2011), Intro. and ch. 1.
- Pamela H. Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago and London: The University of Chicago Press, 2005, repr. 2018), chs. 1-3.

**Contribute** to the Discussion Questions - Week 14 document

## DECEMBER 13: IN CLASS

10:10–11:45 Pigment painting show-and-tell (bring your pigment cards!)  
Discussion of Readings and Conclusions.

11:45–12pm Data management review

- 2021 Digital Protocol Resource Page, Flickr check, transfer Google Doc ownership if needed, etc.

## FOLLOW UP: Week 14

- Complete Field Notes
- **Due December 17:** Complete all field notes (and media) by 11:59pm
- **Due December 23:** Submit Final Project by 11:59pm
  - Claim a new document in the Fall 2021 Final Project for submission by renaming it with your name
  - Your drafts have been moved to the subfolder FA21\_Project Drafts
  - Review Assignment Sheet: Final Projects

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## Statement on COVID-19

We are all required to uphold the Columbia Community Health Compact. Currently, that mandates that all students, staff, and faculty must wear a suitable facemask inside. University policies and requirements may change during the semester.

## Statement on Academic Integrity

The intellectual venture in which we are all engaged requires of faculty and students alike the highest level of personal and academic integrity. As members of an academic community, each one of us bears the responsibility to participate in scholarly discourse and research in a manner characterized by intellectual honesty and scholarly integrity.

Scholarship, by its very nature, is an iterative process, with ideas and insights building one upon the other. Collaborative scholarship requires the study of other scholars' work, the free discussion of such work, and the explicit acknowledgement of those ideas in any work that inform our own. This exchange of ideas relies upon a mutual trust that sources, opinions, facts, and insights will be properly noted and carefully credited.



In practical terms, this means that, as students, you must be responsible for the full citations of others' ideas in all of your research papers and projects; you must be scrupulously honest when taking your examinations; you must always submit your own work and not that of another student, scholar, or internet agent.

Any breach of this intellectual responsibility is a breach of faith with the rest of our academic community. It undermines our shared intellectual culture, and it cannot be tolerated. Students failing to meet these responsibilities should anticipate being asked to leave Columbia.

## **Disability-Related Accommodations**

In order to receive disability-related academic accommodations, students must first be registered with Disability Services (DS). More information on the DS registration process is available online at [www.health.columbia.edu/ods](http://www.health.columbia.edu/ods). Faculty must be notified of registered students' accommodations before exam or other accommodations will be provided. Students who have (or think they may have) a disability are invited to contact Disability Services for a confidential discussion at (212) 854-2388 (Voice/TTY) or by email at [disability@columbia.edu](mailto:disability@columbia.edu).