

ARCL0104: CONSERVATION PROCESSES (2023-2024)**MSc Conservation for Archaeology and Museums
Core Module (30 credits)**

Coordinator: DEAN SULLY

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Room: 403A

Online office hours: Mondays 12.00-1.00pm, 2.00-3.00pm (Tuesday-Thursday in the IoA 6th floor conservation labs).

IMPORTANT INFORMATION REGARDING ASSESSMENTS:

The coursework coversheet is available on the course Moodle pages and here:

<https://www.ucl.ac.uk/archaeology/current-students> under "Policies, Forms and Guidelines".

Please enter your five-digit candidate code on the coversheet and *in the subject line* when you upload your work in Moodle.

Please use your five-digit candidate code as the name of the file you submit.

The use of software to generate content is not allowed for coursework on Modules for this Programme and will be penalised; the use of software for language and writing review and improvement is permitted, and the software and the way it has been used must be indicated in the relevant boxes on the coursework coversheet. UCL defines language and writing review as checking "areas of academic writing such as structure, fluency, presentation, grammar, spelling, punctuation, and language translation".

Please note that late submission, exceeding the maximum word count and academic misconduct (unacknowledged use of text generation software and plagiarism) will be penalized and can significantly reduce the mark awarded for the assignment and/or overall module result.

Please refer to <https://www.ucl.ac.uk/archaeology/current-students/ioa-student-handbook/13-information-assessment>

<https://www.ucl.ac.uk/archaeology/current-students/ioa-study-skills-guide/referencing-effectively-and-ioa-guidelines>

<https://www.ucl.ac.uk/students/exams-and-assessments/academic-integrity>

<https://library-guides.ucl.ac.uk/referencing-plagiarism/acknowledging-AI>

for instructions on coursework submission, IoA referencing guidelines and marking criteria, as well as UCL policies on penalties for late submission, over-length work, the use of text generation software (AI) and academic misconduct.

1. MODULE OVERVIEW

1.1 Module description

This module provides students with a background knowledge and introductory understanding of applied conservation practice. Lectures, case-studies, lab skills & demonstrations introduce the techniques and processes of interventive conservation. This is focused on the evaluation and selection of appropriate conservation methods and materials. Students independently develop the knowledge and skills learned through practical projects as part of ARCL0105.

The module develops critical awareness to approaches to diagnosis, problem creation/solving and application of conservation treatments with an emphasis on linking theory and practice and learning through experimentation.

1.2 Module Aims

To provide an introductory knowledge and understanding of the theory and practice of conservation procedures. To provide experience in evaluation, selection, and application of materials, equipment, and techniques used in the conservation of archaeological and museum objects. By the end of the module, you should be able to:

- demonstrate a good knowledge and understanding of conservation materials and processes
- demonstrate a good knowledge and understanding of the range of treatments in current use for heritage objects made of ceramics, glass, plasters, metals and organics
- recognise and take into account the factors that may affect choice of conservation procedures
- evaluate materials and methods and their suitability for application to objects in a range of different contexts
- work in the conservation laboratories in a safe and responsible manner in accordance with current health and safety regulations
- design and plan a laboratory project, taking into account time, materials, and other resources required
- undertake a laboratory-based project working at a reasonable speed; and making proper use of tools and equipment

1.3 Learning Outcomes

On successful completion of the course students should be able to demonstrate/have developed the following abilities:

- apply discipline specific acquired knowledge and skills
- practice safe laboratory practice
- critical reflection
- team-working
- report writing skills

1.4 Methods of Assessment

- Critical Conservation Report Research Proposal, 1000 words, 30% of module: Monday January 15, 2024
- Critical Conservation Report (CCR), 4000 words, 70% of module: Tuesday May 7, 2024

1.5 Communications

Moodle is the main hub for this course.

Important information will be posted by staff in the Announcements section of the Moodle page, and you will automatically receive an email notification for these.

Please post any general queries relating to module content, assessments and administration in the Questions and queries Moodle forum. The forum will be checked regularly.

For personal queries, please contact the co-ordinator by email (d.sully@ucl.ac.uk).

1.6 Week-by-week summary

Week Term 1	Day/Date/Time	Topic	Lecturer
1	Tues 03.10.23		
	10:00	Module Introduction and Module Assessment Group discussion of low fired ceramic	JS
	14.00	Lecture: Conservation of Archaeological Ceramics	DC/JS
	Wed 04.10.23		
	16.00	Lab Skills: Making up Paraloid solutions	DS
Friday 07.10.23	10.00	Introduction to Lab skills	JS
	14.00	Lab Skills: Making cotton swabs	
2	Tues 10.10.23		
	10.00	Introduction to Cleaning	JS
	14.00	Introduction to Stabilisation and Consolidation	
	Friday 13.10.23		
10.00	Lab Skills: Understanding solvents / Solubility tests for adhesives/Diphenylamine test for cellulose nitrate /Dry cleaning techniques for ceramics etc.	JS	
3	Tue17.10.23		
	11.00	Lecture: Conservation of High-Fired Ceramics	KD
	14.00	Lab Skills: Use of Steam Cleaner and cyclododecane	DS
	Wed 18.10.23		
	14.00	Lecture: Plaster and Mudbrick Conservation	CG
	Friday 20.10.23		
	10.00	Lecture: Introduction to Reconstruction and Loss Compensation	JS
14.00	Lab Skills: Making up Epoxy Resin		
4	Tues 24.10.23		
	10.00	Lecture: Building Conservation (tbc)	DP
	15.00 TBC	Online Lecture: Conservation of Stone	CM
	Friday 27.10.23		
	10.00	Introduction to ARCL0107 (JS); Individual meetings with Jill about ARCL0107	JS
14.00	Lab Skills: plaster of Paris and microballoon fills		
5	Tues 31.10.23		
	10.00	Conservation of the Ain ghazal figures (tbc)	KT
	14.00	Lab Skills: Flexible fills	DS
	Wed 01.11.23		
	11.00	Lab Skills: Colour matching	KS
	Friday 03.11.23		
	10.00	Lecture: Salts and desalination	JS
14.00	Lab Skills: Poulticing		
6	READING WEEK		
7	Tues 14.11.23		
	10.00	Lecture: Conservation of Copper alloys	JS
	14.00	Online Lecture: Research into inhibitors for copper alloys	ET

	Thur 16.11.23		
	15.00	Online Lecture: Conservation of Glass	SK
	Friday 17.11.23		
	14.00	Lab Skills: Cleaning Copper alloys	JS
8	Tues 21.11.23		
	10.00	Lecture: Conservation of iron objects	JS
	14.00	Lecture: Metals conservation (Gold, Silver, Tin etc)	GM
	Friday 24.11.23		
	14.00	Lab Skills: Cleaning Iron objects	JS
9	Tues 28.11.23		
	10.00	Lecture: Conservation of Archaeological Wood	DS
	14.00	Lecture: Conservation for Exhibition; the Pompei Exhibition	MO
	Friday 01.12.23		
	10.00	Lecture: Corrosion Inhibitors for Metals	JS
	14.00	Lab Skills: Use of BTA and Tannic acid	
10	Tues 05.12.23		
	10.00	Lecture: Conservation of Wood	DS
	1400	Lab Skills: Consolidating Organic objects	
	Thur 06.12.23		
	16.00	Lecture: IMLS Project at Denver Museum of Nature & Science	KK
	Friday 08.12.23		
	14.00	Lecture: Conservation of Decorative surfaces (tbc)	CV
11	Tues 12.12.23		
	10.00	ARCL0104 End of term review and discussion tutorial	DS
	11.00	Group CCR presentations	
	14.00	Individual meetings to discuss CCR	
	Wed 13.12.23		
	11.00	Lab Skills: Relaying flaking Paint	DS
Term 2			
12	Tues 09.01.24		
	10.00	Lecture: Conservation of Archaeological Skin and Leather	DS
	14.00	Lab Skills: Identification of skin and leather	
	Friday 12.01.24		
	14.00	Lab Skills: Air abrasive training	JS
13	Mon 15.01.24		
		ARCLO104 Critical Conservation Report Proposal Submission Deadline	
	Tues 16.01.24		
	10.00	Lecture: Conservation of Skin and Leather	DS
	14.00	Lab skills: Assessing leather condition	
	Wed 17.01.24		
	14.00	Lab Skills: Flexible Backing Repairs	DS
	Friday 19.01.24		
	14.00	Lecture: Conservation of Plants and baskets	BW
14	Tues 23.01.24		
	10.00	Lecture: Conservation of Feathers and hard tissues	EK
	14.00	Lecture: Archaeological Conservation	LD

	Wed 24.01.24 14.00	Lab Skills: Conservation of Archaeological Organics	DS
15	Tues 30.1.24 9.00-17.00	Paper Conservation: Visit to Museum Conservation Services Ltd, Cambridge(Travel in minibus)	NB
	Friday 02.02.24 14.00	Lab Skills: Approach to composite objects	JS
16	Tues 06.02.24 10.00 c.16.00	Lecture: Conservation of Plastic objects Online Lecture: Conservation of Modern and Contemporary Art	HC/MB SG
	Thur 08.02.24 c.11.00/14.00 (tbc)	Online Lecture : Conserving at the Royal Place Museum Beijing	DQ
17	READING WEEK		
18	Tues 20.02.24 10.00 14.00	Lecture: Conservation of Textiles Online Lecture: Conservation in private practice	KSm/FH KC
19	Tues 27.02.24 10.00 14.00	Lab Skills: Humidification of organic objects Lecture: Ways of seeing	DS EMP
	Friday 01.03.24 10.00 14.00	Lecture: Painting Conservation Lab Skills: Conserving Canvas paintings	SM
20	Tues 05.03.24 10.00 14.00	Online Lecture: Who do we exclude when we keep things for the future? Lab Skills: Use of anoxic environments	JH DS
21	Tues 12.03.24 10.00 14.00	Lecture Conservation of Musical Instruments (tbc) Online lecture: Conservation of Asian Lacquer	ES JC
22	Tues 19.03.24	Applied Conservation Practice	DS
23	Tues 26.03.24	Applied Conservation Practice	DS
Term 3			
25	Tues 07.05.24	ARCLO104 Critical Conservation Report Proposal Submission Deadline	

1.7 Lecturers (or other contributors)

BW	Barbara Wills	Senior Conservator (Organics)	The British Museum
CM	Dr Cyril Maucourant	Post-doc Conservation Science Researcher (Stone)	Sheffield Hallam University (MERI)
CG	Dr Caitlin O'Grady	Lecturer	UCL (Institute of Archaeology)
CV	Dr Carmen Vida	Conservator (Sculpture)	Victoria and Albert Museum
DC	Dr Duygu Camurcuoglu	Senior Objects Conservator and Researcher	The British Museum
DP	David Pope	Building Conservator/ PhD researcher	UCL/Ernest Barnes Limited
DS	Dr Dean Sully	Associate Professor	UCL (Institute of Archaeology)
EK	Emilia Kingham	Conservator	UCL (Library, Culture, Collections and Open Science)
EMP	Elizabeth Pye	Emeritus Professor	UCL (Institute of Archaeology)
ES	Ellen Seidell	Conservator (musical instruments)	Royal College of Music
ET	Emilie Trehu	Assistant Conservator	Museum of Fine Arts, Boston

FH	Frances Hartog	Senior Textile Conservator	Victoria and Albert Museum
GM	Graeme McArthur	Conservator	UCL (Library, Culture, Collections and Open Science)
HC	Hannah Cenusa	Conservator	The British Museum
JC	Dr Julie Chang	Conservation Researcher	Independent
JH	Jane Henderson	Professor of Conservation	Department of Archaeology and Conservation, Cardiff University
JS	Jill Saunders	Lecturer (Teaching)	UCL (Institute of Archaeology)
KC	Kelly Caldwell	Director of Conservation & Senior Conservator	Evergreene Architectural Arts
KD	Dr Kelly Domoney	Conservation Manager	Ashmolean Museum
KK	Katy Kaspari	IMLS Conservator	Denver Museum of Nature & Science
KS	Kim Selvaggi	Artist and Conservation Researcher	UCL Slade School of Fine Art
KSm	Katy Smith	Textile conservator	Victoria and Albert Museum
KT	Kathy Tubb	Retired Lecturer	UCL (Institute of Archaeology)
LD	Luisa Duarte	Archaeological Conservator	Museum of London
MB	Morgan Browning	UCL MSc Graduate	Independent
MO	Miriam Orsini	Conservator (Ceramic, Glass, and Metal)	The British Museum
NB	Nicholas Burnett	Paper Conservator	Museum Conservation Services Ltd
SG	Sarah Giffin	Archives Lab Manager	Veterans Curation Programme
SK	Stephen Koob	Chief Conservator Emeritus	Corning Museum of Glass
SM	Susan Moore	Painting Conservator	Richfords Insurance

1.8 Weekly Module Plan

This module is primarily taught through lectures and practical skill sessions taking place on Tuesdays in the teaching area of the Conservation Lab (615). Some additional sessions will occur on Fridays, and some Wednesdays/Thursdays. Generally, lectures will take place in the mornings (10am) and practical sessions in the afternoon (2pm). Most teaching will be in person (with some online lectures), however you are expected to attend all teaching sessions in person. Some weeks there may be slight variations to the teaching pattern, you should refer to this handbook to check the timetable. Students are required to undertake set readings in order to be able to follow lecture material and participate in post-presentation discussions. Teaching intensity is designed to decrease over the course of the year to accommodate your practical ARCL0105 work. Formal teaching for ARCL0104 will end by the middle of term 2, after which you will still have your CCR to complete (see [Assessment Booklet](#)).

1.9 Workload

This is a 30-credit module which equates to 300 hours of learning time including session preparation, background reading, and researching and writing your assignments. With that in mind you should expect to organise your time in roughly this way:

150 hours	Staff-led teaching sessions (lectures, skill sessions, group seminars, and individual tutorials)
70 hours	Self-guided session preparation (reading, listening, note-taking and online activities), c.6.5 hours a week
80 hours	Reading for, and writing of, assessed coursework

2. ASSESSMENT

This module is assessed by the Critical Conservation Report (CCR) Research Proposal and the Critical Conservation Report. Detailed guidance is presented in the [ARCL0104 Conservation Processes Assessment Booklet available on Moodle](#). These assignments will be discussed in class, in advance of the submission deadline. If you are unclear about the nature of an assignment, you should discuss this with the Module Coordinator in advance (via office hours or class Moodle forum). You will receive feedback on your written coursework via Moodle and have the opportunity to discuss your marks and feedback with the coordinator in their office hours.

For more details see the 'Assessment' section on Moodle. The [IoA marking criteria](#) can be found in the IoA Student Handbook (Section 12: Information on assessment). The [IoA Study Skills Guide](#) provides useful guidance on writing different types of assignment.

Please note that **late submission, exceeding the maximum word count and academic misconduct (plagiarism)** will be penalized and can significantly reduce the mark awarded for the assignment and/or overall module result. On requirements, please do consult.

<https://www.ucl.ac.uk/archaeology/current-students/ioa-student-handbook/12-information-assessment> with sections 12.8: submission deadlines, 12.10: word count, 12.12–14: academic integrity.

3. PREPARATIONS FOR CLASS

You are expected to read the **essential readings** listed in this handbook to support your learning about different materials, and for effective participation in discussions after lectures. This should be supplemented with selected readings from the **recommended** entries. You can find all of these on the online reading list: <https://ucl.rl.talis.com/modules/arcl0104.html>. This list also contains further optional readings which give you a sense of the range of current work on a given topic and are a starting point for your assignments.

Further resources can also be found under each week's section on Moodle.

4. SYLLABUS

All essential readings are available online through www.ucl.ac.uk/library or via the link provided with the entry. All classes are to be attended in person in the teaching area of the Conservation Lab (615).

4.1 Term 1

WEEK 1			
Tues 03.10.23			
10:00	Module Introduction and Module Assessment		JS
	Group discussion of low fired ceramic		
14.00	Lecture: Conservation of Archaeological Ceramics		DC/JS
Wed 04.10.23			
16.00	Lab Skills: Making up Paraloid solutions		DS
Friday 07.10.23			
10.00	Introduction to Lab skills		JS
14.00	Lab Skills: Making cotton swabs		

- ESSENTIAL READING

Ashley-Smith, J. 2016. Losing the edge: the risk of a decline in practical conservation skills. *Journal of the Institute of Conservation*, 39, 2, 119-132. See also <https://www.iiconservation.org/node/7384>

Burden, L., Smith, C., Calcutt, P. and Henderson, M. 2004. The reconservation of 105 Bronze age ceramics, *The Conservator*, 28:1, 37-46, DOI: [10.1080/01410096.2004.9995201](https://doi.org/10.1080/01410096.2004.9995201)

Cronyn, J.M., 1990. *The Elements of Archaeological Conservation*. London: Routledge, Sections 4.1 and 4.5.

Koob, S., P. 1986. The Use of Paraloid B-72 as an Adhesive: Its Application for Archaeological Ceramics and Other Materials. *Studies in Conservation*, 31, 1, 7-14.

Saunders, J. 2019. Conserving Conservation: The Value of Traditional Metalworking Skills. Blog entry: <https://plowden-smith.com/traditional-metal-restoration-skills/>

Saunders, J., 2021. [ARCL0104 Assessment Booklet](#). On Moodle.

- RECOMMENDED READING

Jones, S. 2016. Wrestling with the social value of heritage: problems, dilemmas, and opportunities. *Journal of Community Archaeology and Heritage*, 4/1, 1-17.

Logan, W., and Wijesuriya, G. 2015. New Heritage Studies and Education, Training, and Capacity-Building. In Logan, W., Craith, M., N., and Kockel, U. (eds) 2015. *A Companion to Heritage Studies*. USA: Wiley-Blackwell, 557-573.

Poulios, I., 2010. Moving Beyond a Values-based Approach to Heritage Conservation. *Conservation and Management of Archaeological Sites*, 12, 2, 170-185.

Stovel, H. Stanley-Price, N., Killick, R. (eds.). 2005. *Conservation of Living Religious Heritage*. ICCROM Conservation Studies 3. Rome: ICCROM.

Sully, D., 2015. Conservation theory and practice: Materials, values, and people in heritage conservation. In C. McCarthy, C. (ed.) Volume 4: *Museum Practice: Critical Debates in the Museum Sector*. *International Handbook of Museum Studies*. Sydney: John Wiley & Sons, 1–23.

WEEK 2			
Tues 10.10.23			
10.00		Introduction to Cleaning	JS
14.00		Introduction to Stabilisation and Consolidation	
Friday 13.10.23			
10.00	Lab Skills: Understanding solvents/Solubility tests for adhesives /Diphenylamine test for cellulose nitrate/Dry cleaning techniques for ceramics		JS

- ESSENTIAL READING

Conservation Unit of the Museums and Galleries Commission 1992. *Science for Conservators: Book 2 Cleaning*. London: MGC & Routledge. 1-40.

Cronyn, J., M. 1990. *The Elements of Archaeological Conservation*. London: Routledge, Section 3.3.2.1, 63-66.

Daintith, C., 1995. *A consolidation treatment for ethnographic pottery from New Guinea*. In Giles, S. and Hill, H. (eds.) *Where to start, where to stop?* Papers from the British Museum / MEG Ethnographic Conservation Colloquium. Museum Ethnographers Group Occasional Papers Number 4, Hull: Museum Ethnographers Group, 121-130.

Lab Skills Handout: Cleaning Ceramics. [On Moodle](#).

Torraca, G., and International Centre for the Study of the Preservation the Restoration of Cultural Property. 1990. *Solubility and Solvents for Conservation Problems*. 4th ed. Rome: ICCROM, 1990. https://www.iccrom.org/sites/default/files/2018-02/2005_torraca_solubility_eng_90402_light.pdf

- RECOMMENDED READING

Brooks, M., M., and Eastop, D. 2006. Matter out of Place: Paradigms for Analyzing Textile Cleaning. *Journal of the American Institute for Conservation*, 45, 3, 171-181.

CCI 2011. *Symposium 2011: Adhesives and Consolidants for Conservation: Research and Applications*. https://publications.gc.ca/collections/collection_2019/pch/CH57-4-8-2011.pdf

Hansen, E., Doehne, E., Fidler, J., Larson, J., Martin, B., Matteini, M., Rodriguez-Navarro, C., Pardo, E., S. Price, C., De Tagle, A., Teutonico, J., M., and Weiss, N. 2003. A Review of Selected Inorganic Consolidants and Protective Treatments for Porous Calcareous Materials. *Studies in Conservation*, 48, Sup1, 13-25.

Lavelle, C., and Miller, L. 2015. Successful Basic Interventive Conservation. *Success Guides, Association of Independent Museums*. <https://www.aim-museums.co.uk/wp-content/uploads/2017/03/successful-basic-interventive-conservation-2017.pdf> Section 5.2.

WEEK 3			
Tue 17.10.23			
11.00	Lecture: Conservation of High-Fired Ceramics		KD
14.00	Lab Skills: Use of Steam Cleaner and cyclododecane		DS
Wed 18.10.23			
14.00	Lecture: Plaster and Mudbrick Conservation		CG
Friday 20.10.23			
10.00	Lecture: Introduction to Reconstruction and Loss Compensation		JS
14.00	Lab Skills: Making up Epoxy Resin		

- ESSENTIAL READING

Buys, S. & Oakley, V., 1993. *The Conservation and Restoration of Ceramics*. London: Butterworth Heinemann. 3-62 and 106-149.

Conservation Unit of the Museums and Galleries Commission 1992. *Science for Conservators: Book 3 Adhesives and Coatings*. London: MGC & Routledge. Start with chapters 1 and 2.

Cronyn, J., M. 1990. *The Elements of Archaeological Conservation*. London: Routledge. 102-155.

Lab Skills Handout: Guidelines for the Selection and Use of Adhesives on Ceramics. [On Moodle](#).

Vinçotte, A., Beauvoit, E., Boyard, N., and Guilminot, E. 2019. Effect of Solvent on PARALOID® B72 and B44 Acrylic Resins Used as Adhesives in Conservation. *Heritage Science*, 7, 42.

- RECOMMENDED READING

Down, J., 1986. The Yellowing of Epoxy Resin Adhesives: Report on High-Intensity Light Aging. *Studies in Conservation* 31, 4, 159-170.

Drescher, T. W. 2003. *Priorities in Conserving Community Murals*. Los Angeles: The Getty Conservation Institute, Paper presented at the Getty symposium "Mural Painting and Conservation in the Americas," Los Angeles, CA, May 16-17, 2003.

http://www.getty.edu/conservation/publications_resources/pdf_publications/drescher.pdf

Garfinkle, A. 2003. *The Legal and Ethical Consideration of Mural Conservation: Issues and Debates*. Los Angeles: The Getty Conservation Institute. Paper presented at the Getty symposium "Mural Painting and Conservation in the Americas," Los Angeles, CA, May 16-17.

http://www.getty.edu/conservation/publications_resources/pdf_publications/garfinkle.pdf

The Getty Conservation Institute 2003. *GCI Lime Mortars and Plasters Bibliography: Sorted by General Category*. Los Angeles: The Getty Conservation Institute.

http://www.getty.edu/conservation/publications_resources/pdf_publications/lmpbib_categories.pdf

The Getty Conservation Institute 2009. *Lime Mortars and Plasters (1998-2009)*

http://www.getty.edu/conservation/our_projects/science/mortars/

Little, M., A., and Carlson, J., H. 1997. Analysis of restoration materials: The Campbell Collection at Winterthur Museum. *Objects Specialty Group Postprints*, 5, 52-74. <http://29aqcgc1xnh17fykn459grmc-wpengine.netdna-ssl.com/osg-postprints/wp-content/uploads/sites/8/2015/02/osg005-04.pdf>

Oakley, V., and Jordan, F. 2009. Transforming the Ceramics galleries: an exercise in restraint. *V & A Conservation Journal*, 57. <http://www.vam.ac.uk/content/journals/conservation-journal/issue-57/transforming-the-ceramics-galleries-an-exercise-in-restraint/>

Royal Collection Trust videos: <https://www.rct.uk/collection/conservation/the-restoration-of-a-chinese-porcelain-vase>

Shank, W. 2003. *Before the Paint Hits the Wall*. Los Angeles: The Getty Conservation Institute. Paper presented at the Getty symposium "Mural Painting and Conservation in the Americas," Los Angeles, CA, May 16-17, 2003.

http://www.getty.edu/conservation/publications_resources/pdf_publications/shank.pdf

Tennent, N., H., and Nobbs, J., H. 2012. Porcelain Conservation: Recent research for optimizing the appearance of bonding and retouching. Poster on Moodle.

WEEK 4			
Tues 24.10.23			
10.00		Lecture: Building Conservation	DP
15.00		Online Lecture: Conservation of Stone	CM
Friday 27.10.23			
10.00		Introduction to ARCL0107 (JS); Individual meetings with Jill about ARCL0107	JS
14.00		Lab Skills: plaster of Paris and microballoon fills	

- ESSENTIAL READING

Cronyn, J., M. 1990. *The Elements of Archaeological Conservation*. London: Routledge, Section 4.2.

Henry, A. (Ed). 2013. *Stone Conservation: Principles and Practice*. London: Routledge. ProQuest Ebook Central, <https://ebookcentral.proquest.com/lib/ucl/detail.action?docID=4186381>.

Koob, S., 1987. Detachable plaster restorations for archaeological ceramics. In Black, J.W. (ed.), *Recent advances in the conservation and analysis of artifacts*. London: Summer Schools Press (Institute of Archaeology), 63-66.

Lab Skills Handout: Gap Fills. [On Moodle](#).

Price, C., A. 1996. *Stone conservation: an overview of current research*. Chapter 2: Putting it right: preventive and remedial treatments. Los Angeles: Getty Conservation Institute.13-24. KP1PRI and http://getty.edu/conservation/publications/pdf_publications/stoneconservation.pdf

- RECOMMENDED READING

Beiner, G.G. and Rabinovich, R., 2013. An elephant tusk – conservation of elephant remains from Revadim Quarry, Israel. *Journal of the Institute of Conservation*, 36.1, 53 – 64.

Notes on chemical preparation at: <http://preparation.paleo.amnh.org/42/chemical>

Brajer, I. 2009. *Taking the wrong path: learning from oversights, misconceptions, failures, and mistakes in conservation: Examples from wall painting conservation in Denmark*. CeROArt 3 <http://ceroart.revues.org/1127#bodyftn5>

Crowther, P.R. and Collins, C.J. (eds.), 1987. The conservation of geological material. *Geol, Curator*, 4(7), 375-474. <http://www.geocurator.org/arch/Curator/Vol4No7.pdf>

Fidler, J. (Ed.). 2002. *English Heritage, Royal Commission on Historical Monuments, and Historic England. Stone: Stone Building Materials, Construction and Associated Component: Their Decay and Treatment*. London: James & James. English Heritage Research Transactions; v. 2.

Griswold, J., and Uricheck., S. 1998. Loss Compensation Methods for Stone. *Journal of the American Institute for Conservation*, 37, 1, 89.

Smith, S. 1994. Filling and painting of ceramics for exhibition in the British Museum - is it acceptable? In Oddy, W., A., (eds), and British Museum. Department of Conservation. *Restoration: Is It Acceptable?* London: British Museum Department of Conservation, Occasional Paper 99, 159-168.

Sully, Dean., 2022. 'Universities curating change at heritage places in urban spaces', In Clare Melhuish, Henric Benesch, Dean Sully and Ingrid Martins Holmberg (eds.) *Co-curating the city: universities and urban heritage past and future*. UCL Press; London.

Wheeler, G., E., Dinsmore, J., K., Ransick, L., J., Charola, A., E., and Koestler, R., J. 1984. Treatment of the Abydos Reliefs: Consolidation and Cleaning. *Studies in Conservation*, 29, 1, 42-48.

WEEK 5			
Tues 31.10.23			
10.00	Conservation of the Ain ghazal figures (tbc)		KT
14.00	Lab Skills: Flexible fills		DS
Wed 01.11.23			
11.00	Lab Skills: Colour matching		KS
Friday 03.11.23			
10.00	Lecture: Salts and desalination		JS
14.00	Lab Skills: Poulticing		

- ESSENTIAL READING

Grissom, C., A. 1996. Conservation of Neolithic lime plaster statues from 'Ain Ghazal. *Studies in Conservation*, 41, sup1, 70-75. DOI: 10.1179/sic.1996.41.Supplement-1.70

Lee, L., M., Rogers, P., Oakely, V., and Navarro, J. 1997. Investigations into the Use of Laponite as a Poulticing Material in Ceramics Conservation. *Conservation Journal*, 22.

<http://www.vam.ac.uk/content/journals/conservation-journal/issue-22/investigations-into-the-use-of-laponite-as-a-poulticing-material-in-ceramics-conservation/>

Paterakis, A.B., 1998. The desalination of consolidated ceramics. In Paterakis, A.B., (ed.) *Glass, Ceramics and Related Materials Interim Meeting of the ICOM-CC Working Group September 1998, Vantaa, Finland*. Vantaa, Finland: EVTEK Institute of Arts and Design, 145-153.

Tubb, K. 2002. The statues of 'Ain Ghazal: discovery, recovery and reconstruction. *Archaeology International* 5, 47-50 www.ai-journal.com/article/download/ai.0514/165

Video: Smithsonian Science: After a bulldozer unearthed five statues in Ain Ghazal in 1984, Smithsonian conservators carefully restore these otherworldly figures. <http://smithsonianscience.org/2011/02/after-a-bulldozer-unearths-five-statues-in-ain-ghazal-jordan-in-1984-smithsonian-conservators-meticulously-restore-them/>

- RECOMMENDED READING

Norquest, S. 2008. Preventing Poultice Problems: A Study of Ceramic Stain Reduction. http://29aqcgc1xnh17fykn459grmc-wpengine.netdna-ssl.com/anagpic-student-papers/wp-content/uploads/sites/11/2020/04/2008ANAGPIC_Norquest.pdf

Pel, L., Sawdy, A., and Voronina, V. 2010. Physical Principles and Efficiency of Salt Extraction by Poulticing. *Journal of Cultural Heritage*, 11, 1, 59-67.

Voronina, V., Pel, L., Sawdy, A., and Kopinga, K. 2013. The Influence of Osmotic Pressure on Poulticing Treatments for Cultural Heritage Objects. *Materials and Structures*, 46, 1, 221-31.

WEEK 6, READING WEEK

WEEK 7

Tues 14.11.23		
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10.00	Lecture: Conservation of Copper alloys	JS
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	14.00	Online Lecture: Research into inhibitors for copper alloys	ET
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14.00		
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Thur 16.11.23		
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15.00	Online Lecture: Conservation of Glass	SK
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Friday 17.11.23		
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14.00	Lab Skills: Cleaning Copper alloys	JS
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			JS
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			JS
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- ESSENTIAL READING

Bertholon, R. 2001. Characterisation and Location of Original Surface of Corroded Metallic Archaeological Objects. *Surface Engineering*, 17, 3, 241-245.

Brown, S., and Strobl, S. 2002. *A Fragile Inheritance: The Care of Stained Glass and Historic Glazing: A Handbook for Custodians*. London: Church House.

Cronyn, J., M. 1990. *The Elements of Archaeological Conservation*. London: Routledge. Sections 5.1 and 5.5.

Davison, S. 2003. *Conservation and Restoration of Glass*. Oxford: Butterworth Heinemann. Particularly section 7.

Koob, S., P. 2006. *Conservation and Care of Glass Objects*. London: Archetype Publications.

- RECOMMENDED READING

Chemello C., Brambilla, L., and Joseph, E. 2019. *Metal 2019 Proceedings of the Interim Meeting of the ICOM-CC Metals Working Group*, September 2-6, 2019, Neuchâtel, Switzerland. On Moodle.

Corning Museum Printed Beaker Restoration videos on Moodle.

Degrigny, C. 2010. Use of electrochemical techniques for the conservation of metal artefacts: a review. *Journal of Solid State Electrochemistry*, 14, 3, 353-361.

Drayman-Weisser, T. 1994. A Perspective on the History of the Conservation of Archaeological Copper Alloys in the United States. *Journal of the American Institute for Conservation*, 33, 2, 141-152.

Knotkova, D. & Kreislova, K. 2007. Atmospheric corrosion and conservation of copper and bronze. In: Moncmanová, A. (ed.) *Environmental Deterioration of Materials*. 107-138. Southampton: WIT Press.

Freitag, J. 2012. Restoration and Conservation of Freely Weathered Bronzes in Germany - a Retrospect of the Methods of Work and the Decision-Making Processes over the Last 15 Years. In: Eggert, E. & Schmutzler, B. (eds.) Conference paper presented at: *Bronze Conservation Colloquium 2012*. 55-57. See Moodle.

Gardiner, H. 2017. Conservation and Observation: more on a copper alloy cauldron from Ur. British Museum blog: <https://blog.britishmuseum.org/conservation-and-observation-more-on-a-third-millennium-bc-copper-alloy-cauldron-from-ur/>

Lab Skills Handout: Cleaning Metals. On Moodle.

Matteini, M., Lalli, C., Tosini, I., Giusti, A. & Siano, S. 2003. Laser and chemical cleaning tests for the conservation of the Porta del Paradiso by Lorenzo Ghiberti. *Journal of Cultural Heritage*, 4, 147-151.

Robbiola, L., Blengino, J., M. & Fiaud, C. 1998. Morphology and Mechanisms of Formation of Natural Patinas on Archaeological Cu₂Sn Alloys. *Corrosion Science*, 40, 12, 2083-2111.

Saunders, J., and Golfomitsou, S. 2016. Cleaning complexities: motivations, outcomes and professional perceptions. In Menon, R., Chemello, C., and Pandya, A. (eds). *Metal 2016, Proceedings of the Interim Meeting of the ICOM-CC Metals Working Group, September 26th-30th 2016, New Delhi, India*, 212-219. PDF uploaded to Moodle.

Scott, D., A., and Getty Conservation Institute. 2002. *Copper and Bronze in Art: Corrosion, Colorants, Conservation*. Los Angeles: Getty Conservation Institute.

Strandberg, H. 1997. *Perspectives on Bronze Sculpture Conservation. Modelling Copper and Bronze Corrosion*. Degree of Doctor of Philosophy in Environmental Science with specialization in Chemistry, University of Gothenburg and Chalmers University of Technology.

Texier, A., Legendre, J., Azéma, A., Bouichou, M., and Bottineau, C. 2016. The Vendôme Column: Restoration of a Monumental Bronze in Paris. In: Menon, R., Chemello, C. & Pandya, A., eds. *Proceedings*

of the Interim Meeting of the ICOM-CC Metals Working Group, September 26th-30th, 2016 New Delhi, India. 298-305. On Moodle.

Tréhu, Emilie., Sully, Dean., 2022. Investigating a Sustainable Alternative: L-Cysteine as a Non-Toxic Corrosion Inhibitor for Copper Alloy Conservation. In *Proceedings of the Interim Meeting of the ICOM-CC Metals Working Group September 5-9, 2022, Helsinki, Finland, 1-6. ICOM-CC.*

WEEK 8		
Tues 21.11.23		
10.00	Lecture: Conservation of iron objects	JS
14.00	Lecture: Metals conservation (Gold, Silver, Tin, etc.)	GM
Friday 24.11.23		
14.00	Lab Skills: Cleaning Iron objects	JS

- **ESSENTIAL READING**

Aubert, G., Saunders J., and Golfomitsou, S. 2016. Silver cleaning: Comparative study of three commercial polishers and their use on Islamic historical metalwork. In Menon, R., Chemello, C., and Pandya, A. (eds). *Metal 2016, Proceedings of the Interim Meeting of the ICOM-CC Metals Working Group, September 26th-30th 2016, New Delhi, India, 241-249.* PDF uploaded to Moodle.

Brambilla, L., Michel, A. and Bertholon, R., 2016, September. Condition of Cans in Collections: A Challenge in Conservation. In Menon, R., Chemello, C., and Pandya, A. (eds). *Metal 2016, Proceedings of the Interim Meeting of the ICOM-CC Metals Working Group, September 26th-30th 2016, New Delhi, India, 262-266.* PDF uploaded to Moodle.

Comensoli, L., Kooli, W., Monachon, M., Albini, M., Junier, P., and Joseph, E. 2019. The Potential of Microorganisms for the Conservation-Restoration of Iron Artworks. In Chemello C., Brambilla, L., and Joseph, E. 2019. *Metal 2019 Proceedings of the Interim Meeting of the ICOM-CC Metals Working Group, September 2-6, 2019, Neuchâtel, Switzerland, 242-249.*

Cronyn, J., M. 1990. *The Elements of Archaeological Conservation.* London: Routledge, Section 5.2.

Drayman-Weisser, T. 2000, *Gilded metals: history, technology and conservation.* London: Archetype Publications in association with The American Institute for Conservation of Historic and Artistic Works.

Schmutzler, B., Revay, Z., and Stieghorst, C. 2019. Desalination of Archaeological Iron Objects: Comparing the Effectiveness of Sodium Hydroxide Treatments. In Chemello C., Brambilla, L., and Joseph, E. 2019. *Metal 2019 Proceedings of the Interim Meeting of the ICOM-CC Metals Working Group, September 2-6, 2019, Neuchâtel, Switzerland, 250-256.*

- **RECOMMENDED READING**

Abu-Baker, A., N, and Fischer, P., M., 2014. Analysis and Conservation of an Iron Age Dagger from Tall Abu Al-Kharaz, Jordan Valley: A Case Study. *Mediterranean Archaeology & Archaeometry*, 14, 2, 351.

Argyropoulos, V., Giannoulaki, M., Michalakakos, G., P. & Siatou, A. 2007. A survey of the types of corrosion inhibitors and protective coatings used for the conservation of metal objects from museum collections in the Mediterranean basin. In: Argyropoulos, V., Hein, A. & Harith, M., A. (eds.) *Papers presented at the International Conference on Conservation Strategies for Saving Indoor Metallic Collections with a Satellite Meeting on Legal Issues in the Conservation of Cultural Heritage, Cairo 25*

February - 1 March 2007. 166-170. Athens: Department of Conservation of Antiquities and Works of Art, T.E.I. of Athens.

Bayley, J., Crossley, D. and Ponting, M. 2008. *Metals and metalworking. A research framework for archaeometallurgy*. London: Historical Metallurgy Society <http://hist-met.org/publications/hms-occasional-publications.html>

Degrigny, C. and Le GALL, R., 1999. Conservation of ancient lead artefacts corroded in organic acid environments: electrolytic stabilization/consolidation. *Studies in Conservation* 44, (3), 157-169.

Emmerson, M., J., Watkinson, D., E., and Thunberg, J., C. 2019. Flame Cleaning of Historic Wrought Iron: Practitioner Methods and their Impact on Oxide Morphologies and Post-Treatment Corrosion Rates. In Chemello C., Brambilla, L., and Joseph, E. 2019. *Metal 2019 Proceedings of the Interim Meeting of the ICOM-CC Metals Working Group*, September 2-6, 2019, Neuchâtel, Switzerland, 281-288.

Hollner, S., F. Mirambet, E. Rocca, and S. Reguer. 2010. Evaluation of New Non-toxic Corrosion Inhibitors for Conservation of Iron Artefacts. *Corrosion Engineering, Science, and Technology*, 45, 5, 362-66.

Ioanid, E., G., Ioanid, A., Rusu, D., E., and Doroftei, F. 2011. Surface Investigation of Some Medieval Silver Coins Cleaned in High-frequency Cold Plasma. *Journal of Cultural Heritage*, 12, 2, 220-26.

Nagar, A., and Singh, M., R. 2019. Behaviour of Lead Coated with Benzotriazole Solution in an Organic Acid Environment. In Chemello C., Brambilla, L., and Joseph, E. 2019. *Metal 2019 Proceedings of the Interim Meeting of the ICOM-CC Metals Working Group*, September 2-6, 2019, Neuchâtel, Switzerland, 198-203.

WEEK 9			
Tues 28.11.23			
10.00	Lecture: Conservation of Archaeological Wood		DS
14.00	Lecture: Conservation for Exhibition; the Pompei Exhibition		MO
Friday 01.12.23			
10.00	Lecture: Corrosion Inhibitors for Metals		JS
14.00	Lab Skills: Use of BTA and Tannic acid		

- **ESSENTIAL READING**

Durrant, J. 2020. Last Supper in Pompeii. *Journal of Curatorial Studies*, 9, 1, 143-46.

Cronyn, J.M., 1990. *The Elements of Archaeological Conservation*. London: Routledge, Sections 5.3-5.7, & 6.1-6.3.

Hassairi, H., Bousseimi, L., Khosrof, S., and Triki, E. 2013. Evaluation of the Inhibitive Effect of Benzotriazole on Archeological Bronze in Acidic Medium. *Applied Physics, A, Materials Science & Processing*, 113, 4, 923-31.

Kusmieriek, E., and E. Chrzescijanska. 2015 Tannic Acid as Corrosion Inhibitor for Metals and Alloys. *Materials and Corrosion*, 66, 2, 169-74.

Milne, G. and Sully, D., 2014. *The Gresham Ship Project: A 16th-Century Merchantman Wrecked in the Princes Channel, Thames Estuary Volume II: Contents and Context*. BAR Publishing.

Palomar, T., and Cano, E. 2018. Comparative assessment of mechanical, chemical and electrochemical procedures for conservation of historical lead. *Journal of Cultural Heritage*, 30, 34-44.

- RECOMMENDED READING

Albini, M., Letardi, P., Mathys, L., Brambilla, L., Schröter, J., Junier, P., and Joseph, E. 2018. Comparison of a Bio-based Corrosion Inhibitor versus Benzotriazole on Corroded Copper Surfaces. *Corrosion Science*, 143, 84-92.

CCI. *Tannic Acid Coating for Rusted Iron Artifacts*. Formerly published under the title Tannic Acid Treatment – Canadian Conservation Institute. Notes 9/5. <https://www.canada.ca/en/conservation-institute/services/conservation-preservation-publications/canadian-conservation-institute-notes/tannic-acid-rusted-iron-artifacts.html>

Mei, L., Liao, L., Wang, Z., and Xu, C. 2015. Interactions between Phosphoric/Tannic Acid and Different Forms of FeOOH. *Advances in Materials Science and Engineering*, 1-10.

Mezzi, A., Angelini, E., De Caro, T., Grassini, S., Faraldi, F., Riccucci C., and Ingo, G., M. 2012. Investigation of the Benzotriazole Inhibition Mechanism of Bronze Disease. *Surface and Interface Analysis*, 44, 8, 968-71.

Pillard, D., A., Cornell, J., S., DuFresne, D., L., and Hernandez, M., T. 2001. Toxicity of Benzotriazole and Benzotriazole Derivatives to Three Aquatic Species. *Water Research (Oxford)*, 35, 2, 557-60.

Rubim, J., Gutz, I., G., R., Sala, O., and Orville-Thomas, W., J. 1983. Surface Enhanced Raman Spectra of Benzotriazole Adsorbed on a Copper Electrode. *Journal of Molecular Structure*, 100, 571-83.

Schmuecker, E., and Payton, R. 2010. Historic Iron Stabilisation Treatments: A Public Survey. Poster presented at ICOM-CC Metals 2010. On Moodle.

Sease, C. 1978. Benzotriazole: A Review for Conservators. *Studies in Conservation*, 23, 2, 76-85.

WEEK 10			
Tues 05.12.23			
10.00		Lecture: Conservation of Wood	DS
1400		Lab Skills: Consolidating Organic objects	
Thur 06.12.23			
16.00		Lecture: Inclusive Conservation at Denver Museum of Nature & Science	KK
Friday 08.12.23			
14.00		Lecture: Conservation of Decorative surfaces (tbc)	CV

- ESSENTIAL READING

Cronyn, J.M., 1990. *The Elements of Archaeological Conservation*. London: Routledge, Section 6.2.

Geary, A. 2004. Three-dimensional Virtual Restoration Applied to Polychrome Sculpture. *Conservator (London)* 28, 1, 20-34.

The Getty Conservation Institute and Junta Andalucía Conserjería de Cultura, eds. 2004. *Workshop on Methodology for the Conservation of Polychromed Wooden Altarpieces: Document on Retablos 2002*. Los Angeles: The Getty Conservation Institute.

https://www.getty.edu/conservation/publications_resources/pdf_publications/pdf/polychrome_eng.pdf

Choose one case study (20ff.).

Hansen, E., F., Walston, S., and Bishop, M., H. (eds). 1993. *Matte paint; its history, technology, analysis, properties and conservation treatment*. Supplement to AATA 30, Marina Del Re: Getty Conservation Institute.

Lamb, A. 1995. To play or not to play? The ethics of musical instrument conservation. *Conservation Journal*, 15. <http://www.vam.ac.uk/content/journals/conservation-journal/issue-15/to-play-or-not-to-play-the-ethics-of-musical-instrument-conservation/>

Lee K., Yu, J., Lee, H., Go, I. (Eds.). 2012. *Conservation of Wooden Objects*. Daejeon Korea: National Research Institute of Cultural Heritage. <https://primastoria.files.wordpress.com/2014/10/wood-conservation-nrich.pdf> Start with one chapter according to your own interest from Section 2 Conservation Treatment.

Spirydowicz, K., 1996. The conservation of ancient Phrygian furniture. In Roy, A and Smith, P (eds.) *Archaeological Conservation, and its Consequences* London: IIC, 166-171.

Young, P., Darrah, J., Pilc, J., and Yorke, J. 1991. A Sieneese cassone at the Victoria and Albert Museum. *The Conservator*. 15, 45-53.

Here's why the Indian Cultures Hall at Denver Museum of Nature & Science had to come down: A walkthrough shows, specifically, what was wrong with the 45-year-old exhibit [- RECOMMENDED READING](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Farchive.ph%2F2ZExO&data=05%7C01%7Cd.sully%40ucl.ac.uk%7Cda02e4e6cca8472b07f508dbbf773ed9%7C1faf88fea9984c5b93c9210a11d9a5c2%7C0%7C0%7C638314291107380340%7CUnknown%7CTWFpbGZsb3d8eyJWljojoiMC4wLjA%7CwMDAiLCJQIjoiV2luMzliLCJBTil6Ik1haWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=4g87HP7NRA%2BUgl%2FO90NKQ0bUH6wXKKxf9XaDsXVIUUs%3D&reserved=0),</p>
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De Figueiredo, J.C.D.A., Marques, H.D.P. and Silva, G.G., 2022. Expanded vermiculite and polyvinyl acetate composite as gap filler for wooden objects conservation. *Journal of Cultural Heritage*, 55, pp.88-94.

English Heritage, 1996. *Waterlogged wood: guidelines on the recording, sampling, conservation and curation of waterlogged wood*. London: English Heritage.

Rivers, S., and Umney, N. 2003. *Conservation of Furniture*. Oxford: Butterworth-Heinemann, 2003. Print.

Wilmering, A., M., 2004. Traditions and Trends in Furniture Conservation. *Studies in Conservation* 49, 1, 23–37. Web.

WEEK 11		
Tues 12.12.23		
10.00	ARCL0104 End of term review and discussion tutorial	DS
11.00	Group CCR presentations	
14.00	Individual meetings to discuss CCR	
Wed 13.12.23		
11.00	Lab Skills: Relaying flaking Paint	DS

There are no set class readings this week but please make use of the time by choosing five articles or book chapters relating to your CCR topic.

4.2 Term 2

WEEK 12			
Tues 09.01.24			
10.00	Lecture: Conservation of Archaeological Skin and Leather		DS
14.00	Lab Skills: Identification of skin and leather		
Friday 12.01.24			
14.00	Lab Skills: Air abrasive training		JS

- ESSENTIAL READING

Cronyn, J., M. 1990. *The Elements of Archaeological Conservation*. London: Routledge, Sections 6.3.

Gottsmann, S. 2009. A Gut Skin Parka from the Ethnographic Collection of the Reiss-Engelhorn Museum, paper presented at the conference *Scraping Gut and Plucking Feathers: The Deterioration and Conservation of Feather and Gut Materials*, A conference held at the University of York on 6 October 2009. On Moodle.

Kite, M., and Thomson, R. 2006. *Conservation of Leather: And Related Materials*. (Web version). Chapters 13, 20, and 22. See also Chapter 23 for Case Studies.

Wright, M. (ed.) 2002. *The Conservation of Fur Feather and Skin, Conservators of Ethnographic Artefacts*. London: Archetype. Select a chapter according to your interest.

- RECOMMENDED READING

Horelick, L., A. McHugh K., Madden O. 2011. What's going on with guts? Assessing adhesives used to repair cultural objects made of gutskin. In *CCI Symposium ICC, 17-24 October 2011*, Ottawa, Canada. <http://www.cci-icc.gc.ca/>

WEEK 13			
Mon 15.01.24			
ARCLO104 Critical Conservation Report Proposal Submission Deadline			
Tues 16.01.24			
10.00	Lecture: Conservation of Skin and Leather		DS
14.00	Lab skills: Assessing leather condition		
Wed 17.01.24			
14.00	Lab Skills: Flexible Backing Repairs		DS
Friday 19.01.24			
14.00	Lecture: Conservation of Plants and baskets		BW

- ESSENTIAL READING

Jaeschke, R. 1990. The cleaning and consolidation of Egyptian encaustic mummy portraits. In Mills, J.S. and Smith, P. (eds.). 1990. *Cleaning, retouching and coatings; technology and practice for easel paintings and polychrome sculpture*. Preprints of the Contributions to the Brussels Congress. London: International Institute for Conservation, 16-18.

- RECOMMENDED READING

Cronyn, J.M., 1990. *The Elements of Archaeological Conservation*. London: Routledge. 6.6.

Florian M. E., Kronkright D. P. & Norton R. 1990. *The Conservation of Artifacts Made from Plant Materials*. The Getty Conservation Institute, 20-25 and 242, 254-259.

Hallebeek, P. et al (eds) *Conservation of Leathercraft and Related Objects*. Interim Symposium at the Victoria and Albert Museum, London, 24 7 25 June 1992. London: ICOM Committee for Conservation.

Jackson, K., Huges, A. 2009. Gut Reaction. The History, Treatment and Display Techniques of Gut Garments at the Pitt Rivers Museum, paper presented at the conference *Scraping Gut and Plucking Feathers: The Deterioration and Conservation of Feather and Gut Materials*, ICON Ethnography Group, York, 6th October 2009.

http://www.icon.org.uk/index.php?option=com_content&task=view&id=112&Itemid=

WEEK 14		
Tues 23.01.24		
10.00	Lecture: Conservation of Feathers and hard tissues	EK
14.00	Lecture: Archaeological Conservation	LD
Wed 24.01.24		
14.00	Lab Skills: Conservation of Archaeological Organics	DS

- ESSENTIAL READING

Johnson, J., S. 1994. Consolidation of Archaeological Bone: A Conservation Perspective. *Journal of Field Archaeology*, 21, 2, 221-33.

Lee, C. 2019. Excavation and Conservation Recommendations in Handling Human Skeletal Remains: Case Studies from Desert Oases, Cave Shelters, and Permafrost in China and Mongolia. *Advances in Archaeological Practice*, 7, 1, 68-76. DOI: 10.1017/aap.2018.39

- RECOMMENDED READING

Espinoza, E. & Mann, M.J. 1999 [1991] Identification guide for ivory and ivory substitutes. Washington DC: WWF. <http://www.cites.org/eng/resources/pub/E-ivory-guide.pdf>

Pye, L., and Cleere, D., C. 2018. Conserving Çatalhöyük, a Neolithic Site in Anatolia. *Archaeology International*, 12, 42-46.

Skinner, L. 2013. Archaeological Excavation and Artefact Conservation at the Heroic-era Expedition Bases, Ross Island, Antarctica. *Journal of Glacial Archaeology*, 1, 1, 51-77. DOI: [10.1558/jga.v1i1.51](https://doi.org/10.1558/jga.v1i1.51)

Sullivan, S., and Mackay, R. 2012. *Archaeological Sites: Conservation and Management*. Los Angeles: Getty Conservation Institute. Begin with 1-2 chapters of your choice.

WEEK 15		
Tues 30.1.24		
9.00-17.00	Paper Conservation: Visit to Museum Conservation Services Ltd, Cambridge. (Travel in minibus)	NB
Friday 02.02.24		
14.00	Lab Skills: Approach to composite objects	JS

- ESSENTIAL READING

Alexopoulou, I., and Zervos, S. 2016. Paper Conservation Methods: An International Survey. *Journal of Cultural Heritage*, 21, 922-30.

Miller, E., and Richmond, A. 1993. Conservation liaison: a case study. *V & A Conservation Journal*, 7. <http://www.vam.ac.uk/content/journals/conservation-journal/issue-07/conservation-liaison-a-case-study/>

Scott, C., L., 2012. The use of agar as a solvent gel in objects conservation. *Objects Specialty Group Postprints*, 19, 71-83.

Stulik, D., Miller, D., Khanjian, H., Khandekar, N., Carlson, J., Wolbers, R. and Petersen, W.C., 2004. *Solvent gels for the cleaning of works of art: the residue question*. Getty Publications. Chapter 1.

Tidwell, K., 1996. Adapting Objects Conservation Techniques to Paper: Reshaping Boxes, a Case Study. *Paper delivered at the Book and Paper specialty group session, AIC 24th Annual Meeting, June 10-16, 1996, Norfolk Virginia*. <https://cool.culturalheritage.org/coolaic/sg/bpg/annual/v15/bp15-19.html>

- RECOMMENDED READING

Baglioni, P., Dei, L., Carretti, E. and Giorgi, R., 2009. Gels for the conservation of cultural heritage. *Langmuir*, 25, 8373-8374.

Carretti, E., Bonini, M., Dei, L., Berrie, B.H., Angelova, L.V., Baglioni, P. and Weiss, R.G., 2010. New frontiers in materials science for art conservation: responsive gels and beyond. *Accounts of chemical research*, 43, 6, 751-760.

Goncalves, B. 2018. An Introduction and Guide to Solvent Toxicity <https://www.sustainabilityinconservation.com/post/an-introduction-and-guide-to-solvent-toxicity>

Zumbühl, S. 2019. Solvents, Solvation, Solubilization, Solution: The solubility of materials - An introduction for conservators, including solubility data of selected conservation materials. On Moodle.

WEEK 16			
Tues 06.02.24			
10.00	Lecture: Conservation of Plastic objects		HC/MB
c.16.00	Online Lecture: Conservation of Modern and Contemporary Art		SG
Thur 08.02.24			
c.11.00/14.00tbc	Online Lecture : Conserving at the Royal Place Museum Beijing		DQ

- ESSENTIAL READING

Beerens, L., 2016. Side by side: old and new standards in the conservation of modern art. A comparative study on 20 years of modern art conservation practice. *Studies in Conservation*, 61, sup2, 12-16.

Lawson, L. and Potter, D., 2017. Contemporary art, contemporary issues—conservation at Tate. *Journal of the Institute of Conservation*, 40(2), pp.121-132.

Obermann, S., 2020. Do Modern Materials Need a New Conservation Approach? Approaches to Restoring Sandwich Panels, Polyurethane Foam and Shotcrete. *ICOMOS–Hefte des Deutschen Nationalkomitees*, 73, 101-107.

Shashoua, Y. 2008 *Conservation of Plastics, Materials Science, Degradation and Preservation*. Oxford: Butterworth-Heinemann. Especially: Chapter 6 Degradation of Plastics. Chapter 7. Conservation of plastics, 7.1 Inhibitive conservation

- RECOMMENDED READING

Llamas-Pacheco, R., 2018. The Ephemeral, the Essential and the Material in the Conservation of Contemporary Art: Decision-Making for the Conservation of a Work of Art Made with Butterfly Wings. *Studies in Conservation*, 63(8), pp.441-449.

Rogerson, C., 2010. *Preserving Jewellery Created from Plastics and Rubber: Application of Materials and Interpretation of Objects* (Doctoral dissertation, Royal College of Art). Introduction: https://researchonline.rca.ac.uk/338/1/Cordelia_Rogerson_PhD_Conservation_Preserving_Jewellery_2010.pdf.

Scott Williams, R., Brooks, A. et al. 1998 Guide to the Identification of Common Clear Plastic Films. SPNHC Leaflets (Society of the Preservation of Natural History Collections) no. 3 Fall, 1998.

http://www.spnhc.org/opencms/export/sites/default/spnhc/publications/linked_documents/leaflet3.pdf

Scott Williams, R. 2002. Care of Plastics: Malignant Plastics. WAAC Newsletter, vol 24 no 1.

<http://palimpsest.stanford.edu/waac/wn/wn24/wn24-1/wn24-102.html>

WEEK 17	READING WEEK
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WEEK 18

Tues 20.02.24			
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10.00	Lecture: Conservation of Textiles	KSm/FH
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14.00	Online Lecture: Conservation in private practice	KC
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- ESSENTIAL READING

Boersma, F., Brokerhof, A., W., Van Den Berg, S., and Tegelaers, J. 2007. *Unravelling Textiles: A Handbook for the Preservation of Textile Collections*. London: Archetype. Chapters 9, 10, and 11.

Hirsenberger, H., Ranogajec, J., Vucetic, S., Lalic, B. and Gracanin, D., 2019. Collaborative projects in cultural heritage conservation—management challenges and risks. *Journal of Cultural Heritage*, 37, pp.215-224.

Peachey, J. 2008. And in This Corner: Conservators in Private Practice vs. Institutional Conservators? Blog entry: <https://jeffpeachey.com/2008/04/27/%E2%80%A6and-in-this-corner-conservators-in-private-practice-vs-institutional-conservators/>

Salomonsen, E., 2008. An Evaluation and Preservation Project at the National Museum of Denmark: Management and Presentation. *Studies in Conservation*, 53, 1, 200-204.

Winsor, P. (ed). 2000. Guidelines for museums about working with conservators in private practice. Arts Council England. <https://collectionstrust.org.uk/resource/working-with-independent-conservators/>

Sokhan, M., Gaspar, P., McPhail, D.S., Cummings, A., Cornish, L., Pullen, D., Hartog, F., Hubbard, C., Oakley, V., and Merkel, J.F., 2003. Initial results on laser cleaning at the Victoria & Albert Museum, Natural History Museum and Tate Gallery. *Journal of Cultural Heritage*, 4, pp.230-236.

Sokhan, M., Hartog, F., and McPhail, D. 2005. Surface Analysis of the Laser Cleaned Metal Threads. In *Lasers in the Conservation of Artworks*. Springer, Berlin, Heidelberg. 237-244.

- RECOMMENDED READING

Brooks, M., M. and Eastop, D. 2006. Matter out of Place: Paradigms for Analyzing Textile Cleaning. *Journal of the American Institute for Conservation*, 45, 3, 171-181.

Éri, I. (ed.) 2009. *Conserving textiles: studies in honour of Ágnes Timár-Balázszy*. Rome: ICCROM.
https://www.iccrom.org/sites/default/files/publications/2019-11/iccrom_ics07_conservingtextiles00_en.pdf (pick two articles following your own interests).

Fields, J., A. Wingham, A., Hartog, F. and Daniels, V., 2004. Finding substitute surfactants for Synperonic N. *Journal of the American Institute for Conservation*, 43,1, 55-73.

Gatley, S. 2009. The invisibles. *V&A Museum Conservation Journal* (57) available on:
http://www.vam.ac.uk/res_cons/conservation/journal/number_57/invisibles/index.html

Kamba, N. 2022. *Conservation Practices in Museums: For Researchers and Museum Professionals*. Tokyo: Springer Japan, 2022. Print.

Manes-Rossi, F., Allini, A., Spanò, R. and Macchioni, R., 2018. Performance management change in archaeological sites: The case of Herculaneum Conservation Project. *Journal of Management and Governance*, 22(4), pp.947-979.

Niinimaa, G.S. 1987. Mounting Systems for Ethnographic Textiles and Objects. *Journal of the American Institute for Conservation* 26, 75-84.

See also some private practice company websites e.g., Richard Rogers Conservation <http://www.rrconservation.co.uk/> Julia Nagle Conservation <https://www.julianagle.com/> Jackson Sculpture Conservation <https://jacksonsculptureconservation.com/about> Evergreen Conservation Group Ltd <https://evergreene.com/> etc.

WEEK 19

Tues 27.02.24

10.00	Lab Skills: Humidification of organic objects	DS
14.00	Lecture: Ways of seeing	EMP

Friday 01.03.24

10.00	Lecture: Painting Conservation	SM
14.00	Lab Skills: Conserving Canvas paintings	

Reading (TBC)

WEEK 20

Tues 05.03.24

10.00	Online Lecture: Who do we exclude when we keep things for the future?	JH
14.00	Lab Skills: Use of anoxic environments	DS

- ESSENTIAL READING

Jane Henderson (2020) Beyond lifetimes: who do we exclude when we keep things for the future?, Journal of the Institute of Conservation, 43:3, 195-

212, <https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1080%2F19455224.2020.1810729&data=05%7C01%7Cd.sully%40ucl.ac.uk%7Cd61af5ccfa1142bdee4608dbbe869e27%7C1faf88fea9984c5b93c9210a11d9a5c2%7C0%7C0%7C638313257611719009%7CUnknown%7CTWFpbGZsb3d8eyJWljojoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=AU%2BR4tARhCMSEb4VI70eVK%2BEC%2BtBq%2FcaNC8OpFb%2BNFg%3D&reserved=0>

- **RECOMMENDED READING**

Caitlin DeSilvey & Rodney Harrison (2020) Anticipating loss: rethinking endangerment in heritage futures, International Journal of Heritage Studies, 26:1, 1-7, DOI: 10.1080/13527258.2019.1644530

Sarah May 'Heritage, endangerment and participation: alternative futures in the Lake District', International Journal of Heritage Studies, 26, no. 1 (2020): 71-

86 <https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.tandfonline.com%2Fdoi%2Ffull%2F10.1080%2F13527258.2019.1620827&data=05%7C01%7Cd.sully%40ucl.ac.uk%7Cd61af5ccfa1142bdee4608dbbe869e27%7C1faf88fea9984c5b93c9210a11d9a5c2%7C0%7C0%7C638313257611719009%7CUnknown%7CTWFpbGZsb3d8eyJWljojoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=eG1KM%2BmnFLTDxjNjkhFCiJznkcpdUwOFWdpmU6gaew%3D&reserved=0>

Caitlin de Silvey Chapter 14 14. Palliative curation and future persistence: Life after death and that is in <https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.routledge.com%2FCultural-Heritage-and-the-Future%2FHoltorf-Hogberg%2Fp%2Fbook%2F9781138829015&data=05%7C01%7Cd.sully%40ucl.ac.uk%7Cd61af5ccfa1142bdee4608dbbe869e27%7C1faf88fea9984c5b93c9210a11d9a5c2%7C0%7C0%7C638313257611719009%7CUnknown%7CTWFpbGZsb3d8eyJWljojoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=rhTktg2hDiTQZexDuFhZ%2Bt3QGkBaR1aB9C%2BM6l72GG4%3D&reserved=0>

Jane Henderson & Ashley Lingle (2023) Touch Decisions: For Heritage Objects, Journal of the American Institute for Conservation,

DOI: <https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1080%2F01971360.2023.2175983&data=05%7C01%7Cd.sully%40ucl.ac.uk%7Cd61af5ccfa1142bdee4608dbbe869e27%7C1faf88fea9984c5b93c9210a11d9a5c2%7C0%7C0%7C638313257611719009%7CUnknown%7CTWFpbGZsb3d8eyJWljojoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=oHtiHa92rGYduV5laiArL0m9zQmW8lC8NWQe7SHQ7p8%3D&reserved=0>

WEEK 21

Tues 12.03.24

10.00

Lecture: Conservation of Musical Instruments (tbc)

ES

14.00

Online Lecture: Conservation of Asian Lacquer

JC

Reading (TBC)

Term 3

WEEK 25 **Tues 07.05.24** ARCL0104 Critical Conservation Report Proposal Submission Deadline