FIELD ARCHAEOLOGY. EXCAVATIONS AND SURVEYS IN THE DIGITAL ERA: AN ASSESSMENT OF CUTTING EDGE TECHNIQUES FROM THE FIELD TO THE FINAL PUBLICATION, CONSERVATION AND VALORISATION

INSTRUCTOR: FRANÇOIS GILIGNY

Hours:30

Start Date: **February 07-11/02/2022 or 14-18/02/2022** or March 01-05/03/2022 or 8-12/03/2022

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COURSE OVERVIEW

The course is intended as a holistic approach to excavation and survey methods, strategies and logistics. Including an epistemological and historical review of the evolution of archaeological field methodologies, we will focus on the modern stratigraphic approach of the British tradition as the currently acknowledged correct one. The course will develop a series of lessons on principles of archaeological stratigraphy, excavation methods and procedures both on the retrieval steps of the process and in the study of materials, on site and in laboratories. Accordingly, we will explain flexible choices of excavation priorities and strategies adapted to the context and objectives of the excavator. Along with notions of geology, archaeometry and remote sensing, the course will include theoretical aspects and practical training on digital documentation, relational databases, photographic data, laser scanner, photogrammetry, drones, and total station. The training will proceed with an overview and training in cad software (open access and licenced, like Open office, QGIS and autocad), online collaborative post excavation researches, geographical information systems. Delivery strategies for the dissemination in academic contexts and to the general public will be discussed in detail.

GOALS AND OBJECTIVES

The participants will leave this class with an understanding of the main methods, strategies and imperatives of field archaeology in a flexible and innovative way. Each student will have the opportunity to engage in cutting edge theoretical and practical challenges of current practices within multifaceted research agendas. Excavation methods adapted to the digital age and applied technologies in archaeology will enhance the students' potential to conceive, plan, and deliver a high standard excavation or survey along with a maximum disclosure to both an academic and general public.

TEXTS

Archaeological Site Manual, Museum of London. Department of Urban Archaeology, Museum of London, 1990

BARKER P. — Techniques of Archaeological Excavation. London, Batsford, 1977 (Routledge 3e ed. 1993).

DALY P., EVANS T. L. (ed.) — Digital Archaeology: Bridging Method and Theory. London, Routledge, 2006.

Gamble C., 2007. Archaeology: The Basics (3rd Edition 2015), London, Routledge DOI https://doi-org.ezpaarse.univ-paris1.fr/10.4324/9780203007709

HARRIS Edward C., Principles of Archaeological Stratigraphy, 1989. http://www.harrismatrix.com/book/Principles_of_Archaeological_Stratigraphy.pdf

WHITE G., KING T. F., The archaeological Survey Manual, London, 2007

DAVID B., J. THOMAS (eds), Handbook of Landscape Archaeology, 2008.

GRANT J., GORIN S. & FLEMING N., 2008. The Archaeology Coursebook, Routledge, London & New York (3rd ed.).

ROSKAM S. – Excavation. 2001. Cambridge, Cambridge University PressTASSIE, G. J. & OWENS, L. S. 2010. Standards of Archaeological Excavation: A Field guide to the Excavation Methodology, Recording Techniques and Conventions. London: ECHO Publications and Golden House Publications

Additional readings: Additional readings and material on the sub-subjects of the course will be provided by the tutors.

COURSE REQUIREMENTS

The course grade will be based on the following elements:

	Points
Exams	20
Reading Checks	20
Participation	20
Attendance	20
assignments	20
TOTAL	0/100

EXAMS: online multiple-choice modules

READING CHECKS: reports on reading of teaching material

PARTICIPATION: the course will be held in an interactive, collaborative basis.

ATTENDANCE: obligatory

ASSIGNEMENTS: the students will conduct small assignments regarding possible scenarios of archaeological research using Egyptian case studies

The UP1 reserves the right to make any changes to accommodate class progress.

ADDITIONAL REQUIREMENTS

IT HARDWARE AND SOFTWARE

Every participant should provide a personal computer with a broadband internet connection in order to attend the classes online. Minimum requirements of the computer should meet the needs recommended for Autocad 2018 (free to use in the student's version) and QGIS 3.1 and later.

LANGUAGE

All activities will be held in English. A B2 level is required for a profitable experience.

EXAMS AND ASSIGNMENTS

All evaluation activities are mandatory and necessary to a correct monitoring of the class progress.

ACCESS TO THE COURSE

A complete list of attendants with a brief curriculum and personal interests of particular necessities must be provided at least 4 weeks before the course start date.

SCHEDULE

WK	DATE	TOPIC	READING	ASSIGNMENT	CONTENT
0	Introduction	Introduction to the Course: overview and objectives			
1	The excavation process	1.1. The process of archaeological excavation/research 1.2. Short history of field techniques: a critical assessment	Wheeler 1954, Schnapp 1996	Lecture of general interest in field methods	1.1. excavation process and strategies, project types and contexts 1.2. birth of context and methodic excavations
2	Stratigraphic and horizontal approach	2.1. The stratigraphic and horizontal excavation: theoretical and methodological imperatives 2.2. The stratigraphic excavation: the documentation of structures and layers and chronological synthesis	Roskam 2001, Tassie, G. J. & Owens, L. S. 2010, Browman D. L., Givens D. R., 1996.	Quiz : archaeological stratigraphy in 10 questions Harris matrix exercice	horizontal versus vertical excavation Importance of context documentation on an excavation Context description : US/Fact/Structure system Harris matrix system & the laws of archaeological stratigraphy
3	Study of context and artifacts	3.1. The excavation: type of excavation and flexible strategies in regard of the site/context 3.2. The study and conservation of artefacts/ecofacts	Harris 1989, Roskam 2001	Quiz : preventive conservation of artifacts in 10 questions	c. geoarchaeological context and nature of archaeological sites d. excavation strategies and goals: underwater, urban, open air, cave sites, mines and quarries The documentation and archives management of archaeological collections and geosamples
4	Survey and Palaeoenvironnement	4.1. The archaeological survey, extensive and intensive, the archaeological diagnostic, landscape archaeology 4.2. palaeoenvironnment study : sampling and strategies	Clark 1996, Corsi et al. 2013, Scollar et al. 1990	Quiz : archaeological survey	41. How to manage a survey and combine methods adapted to the field Basic knowledge on Geophysic methods and applications ; Aerial methods : from plane to drone Archaeological diagnostic : aims and methods 42. initiation to strategies, methods and techniques of palaeoenvironment documentation and sampling on archaeological sites : main approaches and case studies
5	Excavation management	5.1. The excavation as a “construction site”: project management, budget, logistics, security measures, motivational, scientific & excavation team	Tassie & Owens 2010 ; Perrin et al. 2014	EG case study :	Constitution of the scientific team, definition of excavation/post-excavation tasks and research fields Project management strategies : budget, logistics and security, human resources

6	Georeferencing and 3D acquisition and process	6.1. georeferencing 6.2. 3D	Cowley & Opitz 2013, Frischer & Dakouri-Hild 2008, Remondino 2011, Remondino & Campana 2014	Manipulation of 3D models of archaeological sites GPS data acquisition	Methods of site georeferencing (total station and GPS) How to register 2D/3D excavation layers and structures Principles of photogrammetry and lasergrammetry applied to the field and planimetric shapes
7	Digital archives and analysis	7.1. Information system, digital Relational databases in the field and related software, open access databases 7.2. CAD and GIS: field and post-excavation use of IT software	Daly & Evans 2006 Connoly & Lake 2006, Wheatley & Gillings 2002	Quiz : archaeological information system in 10 questions Practical registration on Open access system basics on GIS/cad software	What is an archaeological information system How to build and use a Database Initiation to GIS and CAD applied to excavation documentation
8	Reports and publication	8.1. Publication strategies 8.2 Archaeological preliminary reports (classic and online) 8.3. Final publication, monographs and peer review papers	Derudas et al. 2021 ; Hodder 1989 ; Opitz 2018 ;	Lecture of archaeological reports online Analysis of publication means for some countries (Fr, Eg, It, Gr) and main archaeological journals	Publication strategies and choices : what should be published in extenso or as abstract or partially ; Publication process (monography) : from the report to the final publication Contents of preliminary reports
9	Mediation and valorization 1	9.1. Valorization strategies 9.2 Communication during the excavation: Blogs and social networks, Media connections 9.3. Exhibitions, social events, engaging with the public in situ	Meriman 2004 ; Clack & Brittain 2007 ; Stone & Molyneaux 1994 ; Perry & Beale 2015	Exploration of archaeological blogs/ academic blog with a questionnaire Analysis of an exhibition case study with a grid	u. How to valorize the archaeological results : aims, means and media, communication strategies and media Public archaeology : how to involve the public
10	Mediation and valorization 2	10.1 Conservation issues and site future 10.2 Virtual reality/augmented reality	Barcello et al. 2000, Cameron & Kenderdin 2007, Forte 2010, Stanco 2011	Exploration of virtual heritage with virtual tools	v. preventive conservation methods of sites and monuments t. Virtual reconstruction aims and tools

Lecture 1: The excavation process

SCHNAPP A. 1996. *The discover of the past*. London, British Museum Press.

WHEELER M. 2004. *Archaeology from the Earth*. Munshiram Manoharlal Publishers Pvt. Limited, 2004 (original ed. 1954).

WILLEMS W. 1998. Archaeology and Heritage Management in Europe: Trends and Developments. European Journal of Archaeology, 1(3), 293-311. doi:10.1179/eja.1998.1.3.293

Preventive archaeology organization in France: https://www.inrap.fr/en/rescue-archaeology-preventive-archaeology-12003

Lecture 2: Stratigraphic and horizontal approach

ROSKAM S. 2001. Excavation. Cambridge University Press (Cambridge manuals in archaeology).

TASSIE, G. J. & OWENS, L. S. 2010. Standards of Archaeological Excavation: A Field guide to the Excavation Methodology, Recording Techniques and Conventions. London: ECHO Publications and Golden House Publications.

BROWMAN D. L., GIVENS D. R., 1996. “Stratigraphic Excavation: The First "New Archaeology"”, American Anthropologist, New Series, Vol. 98, No. 1, p. 80-95 ; http://www.jstor.org

HELDAL T., BLOXAM E., 2008. QuarryScapes guide to ancient stone quarry landscapes: from documentation to statement of significance, Deliverable of the project EU FP6, INCO/MED 015416 [on line]

http://www.quarryscapes.no/text/Publications/QS_del11_wp9.pdf

Lecture 3: Study of context and artifacts

ROSKAM S. (ed.) 2000. Interpreting Stratigraphy: Site evaluation, recording procedures and stratigraphic analysis, (BAR S910), Archaeopress, Oxford, 256 p.

HARRIS E. C. 1989. Principles of Archaeological Stratigraphy, Academic Press, London.

SOULIER P., 2019. « Dessins, photos, fichiers, cartes ou graphiques », Techniques & Culture [En ligne],

Suppléments au n°71, mis en ligne le 13 septembre 2019 http://journals.openedition.org/tc/11137

Lecture 4: Survey and Palaeoenvironnement

CLARK, A. J., 1996. Seeing Beneath the Soil: Prospecting Methods in Archaeology (New Edition). Revised Edition. B. T. Batsford Ltd., London. 192 p.

CORSI C., SLAPSAK B., VERMEULEN F. (eds), 2013. Good Practice in Archaeological Diagnostics, Non-invasive Survey of Complex Archaeological Sites, Springer, New York (ISBN 978-3-319-01783).

SCOLLAR I., TABBAGH A., HESSE A., HERZOG I., 1990. Archaeological Prospecting and Remote Sensing. Cambridge University Press, Cambridge, 674 p. (ISBN 0 521 32050 X.)

WHITE G. G., KING T. F., 2016. The archaeological survey manual, Taylor & Francis, New York.

Lecture 5 : Excavation management

TASSIE, G. J. & OWENS, L. S. 2010. Standards of Archaeological Excavation: A Field guide to the Excavation Methodology, Recording Techniques and Conventions. London: ECHO Publications and Golden House Publications.

PERRIN K. et al., 2014. A Standard and Guide to Best Practice for Archaeological Archivingi Europe, Eac Guidelines 1

https://archaeologydataservice.ac.uk/arches/attach/The%20Standard%20and%20Guide%20to%20Best%20Practice%20in%20Archaeological%20Archiving%20in%20Europe/ARCHES_V1_GB.pdf

Lecture 6: Georeferencing and 3D acquisition and process

DALY P., EVANS T. L. (ed.) — Digital Archaeology: Bridging Method and Theory. London, Routledge, 2006.

COWLEY, D. et S.OPITZ, R., 2013. Interpreting Archaeological Topography: lasers, 3D data, observation, visualisation and applications. Oxbow Books, 288 p. 978-1842175163.

FRISCHER, B. et DAKOURI-HILD A., (ed.), 2008. Beyond illustration: 2D and 3D digital technologies as tools for discovery in archaeology. British archaeological reports international series 1805. Oxford, Archaeopress, 192 p. 978-1407307213.

REMONDINO F. 2011. Heritage recording and 3D modeling with photogrammetry and 3D sensing. Remote sensing, [en ligne] http://www.mdpi.com/2072-4292/3/6/1104

REMONDINO F., CAMPANA S., 2014. 3D Modeling in Archaeology and Cultural Heritage –Theory and Best Practices, Oxford, Achaeopress (BAR International Series 2598).

Lecture 7: Digital archives and analysis

CONOLLY J., LAKE M. 2006. Geographical Information Systems in Archaeology. Cambridge, Cambridge University Press, .

DALY P., EVANS T. L. (ed.) 2006. Digital Archaeology: Bridging Method and Theory. London, Routledge, 2006.

WHEATLEY D., GILLINGS M. 2002. Spatial technology and archaeology. The archaeological applications of GIS, London, Taylor & Francis, 269 p.

Lecture 8: Reports and publication

DERUDAS P. , DELL'UNTO N., CALLIERI M. & APEL J. 2021. Sharing Archaeological Knowledge: The Interactive Reporting System, Journal of Field Archaeology, 46:5, 303-315, DOI: 10.1080/00934690.2021.1911132

HODDER, I. 1989. Writing archaeology: Site reports in context. Antiquity, 63(239), 268-274. https://doi.org/10.1017/S0003598X00075980

OPITZ R. 2018. Publishing Archaeological Excavations at the Digital Turn, Journal of Field Archaeology, 43 (sup1), S68-S82, https://doi.org/10.1080/00934690.2018.1505409

Lecture 9: Mediation and valorization 1

CLACK T., BRITTAIN M., 2007. Archaeology and the Media, LeafCoast Press, Walnut.

MERRIMAN, N. (dir.). 2004. Public Archaeology. Londres, Routledge.

STONE, P. G. & MOLYNEAUX B. L. 1994.The Presented Past. Heritage, Museums, Education. London, Routledge.

MOSHENSKA G., 2017. Key Concepts in Public Archaeology, UCL Press, London. DOI:10.14324/111.9781911576419

PERRY, S. & BEALE, N. 2015. "The Social Web and Archaeology's Restructuring: Impact, Exploitation, Disciplinary Change" Open Archaeology, vol. 1, no. 1, 2015. https://doi.org/10.1515/opar-2015-0009

Archaeology journals and ranking : https://www.scimagojr.com/journalrank.php?category=3302

Papers to read :

Lorenzon M. & Zermani I., Common Ground: Community Archaeology in Egypt, Interaction Between Population and Cultural Heritage, Journal of Community Archaeology & Heritage, Vol. 3, 2016 - Issue 3, p. 183-199. online: 15 Jul 2016 ; https://doi.org/10.1080/20518196.2016.1207833

Press release "Jebel Sahaba: A succession of violence rather than a prehistoric war", May 27, 2021, CNRS Web-site online

https://www.cnrs.fr/sites/default/files/press_info/2021-05/PR_CNRS_PrehistoricViolenceJebelSahaba_web.pdf

Matsuda A., K. Okamura, 2011. Introduction: New Perspectives in Global Public Archaeology, In: New Perspectives in Global Public Archaeology, DOI: 10.1007/978-1-4614-0341-8_1
https://www.researchgate.net/publication/291120522_Introduction_New_Perspectives_in_Global_Public_Archaeology

Lecture 10: Mediation and valorization 2

BARCELO J., FORTE M., SANDERS D. 2000. Virtual Reality in Archaeology, BAR I.S. N°843, Oxford, Archaeopress.

CAMERON F., KENDERDIN S., 2007. Theorizing Digital Cultural Heritage: A Critical Discourse Media in Transition, The MIT Press.

FORTE, M. 2010. Cyber-archaeology. British archaeological reports international series 2177, Oxford, Archaeopress, 155 p.

STANCO, F., 2011. Digital Imaging for Cultural Heritage Preservation CRC Press.