

Non-invasive Prospection Techniques in Archaeology (A005620)

Course size *(nominal values; actual values may depend on programme)*

Credits 5.0 **Study time 150 h**

Course offerings in academic year 2026-2027

A (semester 2) English Gent

Lecturers in academic year 2026-2027

De Smedt, Philippe	LW02	lecturer-in-charge
Trachet, Jan	LW02	co-lecturer
Verhegge, Jeroen	LA20	co-lecturer

Offered in the following programmes in 2026-2027

	crdts	offering
Bachelor of Arts in Archaeology	5	A
Exchange Programme Archaeology	5	A
Preparatory Course Master of Arts in Archaeology	5	A

Teaching languages

English

Keywords

Archaeology, prospection, satellite remote sensing, aerial photography, geophysical sensors.

Position of the course

This advanced course is part of a package Methodology, aimed at a further in-depth exploration of the methods, techniques and aspects of archaeological prospection.

Contents

Overview of the possibilities of the use of non-invasive prospection techniques in archaeology, especially by means of geophysical sensors and their integration with aerial photography and traditional prospection methods. A practical acquaintance with geophysical prospection equipment in the field is also included in this course.

Initial competences

To have successfully completed the course Introduction to prospection and excavation techniques or to have acquired the intended competences in another way.

Final competences

- 1 To have a critical understanding of the possibilities and limitations of the use of non-invasive prospection techniques in archaeology.
- 2 To be in touch with the ethics regarding the use of these methods in archaeological research.
- 3 To be able to integrate non-invasive prospection data into archaeological research programmes.
- 4 Understand what information non-invasive techniques can provide that is relevant to archaeological research.
- 5 Have an understanding of the practical application of non-invasive techniques in commercial (development-led) and research contexts.
- 6 Understand the relationship between archaeological phenomena, soil properties and physical variations measured with non-invasive sensors.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Lecture, Independent work

Extra information on the teaching methods

Lectures.

Self-reliant work: individual reading

Field practice: demonstration with equipment and registration techniques.

Study material

Type: Syllabus

Name: overview of geophysical soil properties

Indicative price: Free or paid by faculty

Optional: no

Language : English

Available on Ufora : Yes

Online Available : Yes

Available in the Library : No

Available through Student Association : No

Type: Slides

Name: lecture slides

Indicative price: Free or paid by faculty

Optional: no

Language : English

Available on Ufora : Yes

Online Available : Yes

Available in the Library : No

Available through Student Association : No

Type: Reader

Name: compulsory journal papers to support course units

Indicative price: Free or paid by faculty

Optional: no

Language : English

Available on Ufora : Yes

Online Available : Yes

References

- Gaffney C., Gater J., 2011. Revealing the buried past. Geophysics for archaeologists, Stroud: Tempus (reprinted version).

- Wilson D.R., 2000. Air Photo Interpretation for Archaeologists, Stroud: Tempus.

Course content-related study coaching

- For specific questions students can contact the lecturers during their office hours and on the discussion forum on Ufora.

Assessment moments

end-of-term assessment

Examination methods in case of periodic assessment during the first examination period

Written assessment with open-ended questions, Written assessment

Examination methods in case of periodic assessment during the second examination period

Written assessment with open-ended questions, Written assessment

Examination methods in case of permanent assessment**Possibilities of retake in case of permanent assessment**

not applicable

Extra information on the examination methods

Written examination with open and multiple choice questions.

Calculation of the examination mark

100% periodic evaluation.

Facilities for Working Students