MASTER'S PROGRAMME IN

GEOTECHNOLOGIES FOR ARCHAEOLOGY (GTARC)

2° LEVEL - A.Y. 2026/2027

Duration	12 months
Teaching period	January 2027 - July 2027
Internship period	August 2027 - January 2028
Total teaching hours (Lectures, Practical Sessions and Laboratories)	408
Total Internship hours	300
Total ECTS	65

Awarding Institution

Siena University - Via Banchi di Sotto 55 - 53100 Siena (Italy)
Department of Historical Sciences and Cultural Heritage

Type of Academic Programme

II level University Master's Programme

Programme Duration

January 2027 - January 2028

Aims and Objectives

The **GTARC Master** aims to train professionals capable of integrating humanities and technological disciplines through the application of innovative methodologies for the investigation and interpretation of archaeological contexts.

Following the amendment of the Cultural Heritage Code (Legislative Decree 42/2004) and the national regulations governing professional archaeology, the programme places particular emphasis on the main legal aspects related to **preventive archaeology**, with a focus on the use of GIS for **archaeological risk** management.

The professional profiles trained will specialize in remote sensing, aerial photo interpretation, and topographic survey. They will be able to identify and interpret traces of past human activity using non-invasive methods, contextualize archaeological evidence within the territory, produce thematic cartography for the management and interpretation of findings, provide datasets and organize GIS systems functional to the planning of archaeological interventions and territorial administrative needs, as well as communicate results through 3D modelling.

The Course addresses the three main phases of archaeological research:

- archaeological prospection
- interpretation and analysis of archaeological evidence
- data organization, management, and dissemination

Fees

Master's tuition fee: € 3,800

The amount is payable in two instalments: the first instalment of € 2,000 (+ € 16 for the electronic stamp duty payment) to be paid at the time of enrolment; the second instalment of € 1,800 must be paid no later than February 28th 2027.

Venue of the Master's Programme

Center of GeoTechnologies of University of Siena - Via Vetri Vecchi 34 - 52027 San Giovanni Valdarno (AR - Italy)

Total hours

708 hours (lectures + practical sessions + laboratories + internship)

Recognition of Prior Credits (ECTS/CFU)

Admitted candidates may be granted entry credits by the Board of Lecturers (up to a maximum of 25% of the total ECTS credits) for previously completed educational activities in subject areas relevant to the Master's programme, provided that such activities are properly documented by the students. The Board of Lecturers reserves the right to assess the level of preparation in the relevant subjects also through an oral interview or a written test.

Admission Requirements

To enrol in the II level Master's Programme in Geotechnologies for Archaeology is required at least a second-cycle degree:

- All Italian degrees awarded under the regulations prior to d.m. 509/99
- All Italian master's degrees under d.m. 509/99 and under d.m. 270/2004

Graduates from foreign universities, both EU and non-EU, are also eligible, provided their qualification is deemed equivalent to the required Italian degrees by the Master's Academic Board.

Further Information

TEACHING SECRETARIAT:
Office for the Coordination of Training Activities - e-mail master.cgt@unisi.it - Tel. +39 055.9119449

PROGRAMME COORDINATOR:
Prof. Giovanna Pizziolo - e-mail giovanna.pizziolo@unisi.it - Tel. +39 0577. 234871

CGT COLLEGE (ACCOMMODATION):
Debora Graziosi e-mail collegiocgt@unisi.it - Tel. +39 055.9119457

Study Programme

Disciplinary Area	Teaching Activities	Hours	ECTS
RESEARCH METHODS IN ARCHAEOLOGY AND GEOLOGY		**64**	**8**
	Geology and geomorphology	24	3
	Data acquisition in archaeology	16	2
	Data management in archaeology	16	2
	Preventive Archaeology	8	1
GIS AND CARTOGRAPHY FOR ARCHAEOLOGY		**100**	**12,5**
	GPS	4	1
	Fundamentals of GIS	24	3
	GIS Applications	16	2
	Geoprocessing and geospatial AI	20	2,5
	GIS open source	24	3
	GIS Applications to preventive archaeology	16	2
3D MODELING AND ARCHEOSEISMOLOGY		**64**	**8**
	Fundamentals of CAD	24	3
	Archaeological 3D modelling	24	3
	Survey and archaeoseismology of structures	16	2
REMOTE SENSING FOR ARCHAEOLOGY		**56**	**7**
	Fundamentals of remote sensing	16	2
	Practical of remote sensing	16	2
	AI and remote sensing	8	1
	Applications of remote sensing in archaeology	8	1
	Remote sensing exercises applied to archaeological contexts	8	1
PHOTOGRAMMETRY AND ADVANCED SURVEYING TECHNIQUES		**80**	**10**
	Aerial and satellite photogrammetry	40	5
	Theoretical and methodological aspects of oblique aerial photography	8	1
	Aerial and terrestrial LiDAR	32	4
LANDSCAPE ARCHAEOLOGY AND FIELD SURVEY		**44**	**5,5**
	Landscape archaeology	24	3
	Geophysics for archaeology	12	1,5
	Tools and techniques for archaeological contexts	8	1
CURRICULAR INTERNSHIP		**300**	**12**
	Curricular internship	300	12
FINAL EXAM			**2**
	Final Dissertation		2