



Study Plan

School: School of Social Sciences
Degree: Master
Course: Archeology and Environment (cód. 454)

Specialization Environmental Impact Assessment

1st Year - 1st Semester

Specialization Environmental Impact Assessment

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
HIS10509M	Digital Techniques for modelling and visualization of archaeological data	Archeology	3	Semester	78
HIS10510M	Megalithic Culture	Archeology	3	Semester	78
HIS10511M	Archaeology – Culture and Context	Archeology	3	Semester	78
HIS10512M	Methods and Techniques of Archaeological Excavation	Archeology	6	Semester	156
HIS10513M	Archaeological Sites Descriptor - Methods and Techniques for Impact Assessment	Archeology	6	Semester	156
HIS10514M	Religious and Artistic Heritage	History	6	Semester	156
HIS10515M	Research Dissertation / Internship Report I	Archeology	3	Semester	78

1st Year - 2nd Semester

Specialization Environmental Impact Assessment

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
PAO10516M	Geographic Information Systems and Heritage I	Environment and Ecology Sciences	6	Semester	156
HIS10517M	Methods and Techniques of Archaeological Field Survey and Analysis I	Archeology	6	Semester	156
HIS10518M	The History of Archaeology in Portugal I	Archeology	3	Semester	78
GEO10519M	Introduction to Geological Materials	Geosciences	6	Semester	156
HIS10520M	Research Dissertation / Internship Report II	Archeology	3	Semester	78

Group of Options

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
HIS10524M	Laboratory and Desk-based Research in Archaeology	Archeology	3	Semester	78
HIS10525M	Archaeology Sub-Saharan Africa	Archeology	3	Semester	78
PAO10526M	Former Ecology Elements	Environment and Ecology Sciences	6	Semester	156
PAO10527M	Landscape Reading and Understanding	Landscape Arts and Techniques	6	Semester	156
PAO10528M	Geographical Information Systems and Heritage II	Environment and Ecology Sciences	6	Semester	156



2nd Year - 3rd Semester

Specialization Environmental Impact Assessment

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
HIS10521M	Methods and Techniques of Archaeological Field Survey and Analysis II	Archeology	9	Semester	234
HIS10522M	The History of Archaeology in Portugal II	Archeology	3	Semester	78
HIS10523M	Research Dissertation / Internship Report III	Archeology	9	Semester	234

Group of Options

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
HIS10529M	Pre rural and protohistorical : structures and landscapes	Archeology	3	Semester	78
HIS10530M	The World Rural Roman and Post Roman : Structures and Landscapes	Archeology	3	Semester	78
HIS10531M	Urban Archaeology	Archeology	3	Semester	78

Group of Free Options

2nd Year - 4th Semester

Specialization Environmental Impact Assessment

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
Mandatory alternatives					
Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Dissertation				
	Internship				

Conditions for obtaining the Degree:

*** TRANSLATE ME: Para aprovação na componente curricular é necessário a aprovação (através de avaliação ou creditação) das seguintes unidades curriculares:

{ \ } newline

1º Semestre: 7 UC obrigatórias num total de 30 ECTS

{ \ } newline

2º Semestre: 5 UC obrigatórias num total de 21 ECTS e UC's optativas a escolher de entre as indicadas { \ } newline

no quadro n.º 8 num total de 6 ECTS

{ \ } newline

3º Semestre: 3 UC's obrigatórias num total de 21 ECTS e 1 UC optativa a escolher de entre as indicadas no { \ } newline

quadro n.º 9 num total de 3 ECTS e UC optativa Livre num total de 6 ECTS

{ \ } newline

Para obtenção do grau, é necessário também a aprovação na Dissertação ou Relatório de Estágio, com um total de 30 ECTS. ***

Program Contents



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Digital Techniques for modelling and visualization of archaeological data (HIS10509M)

Introduction to Computers applied to archeology.

Acquisition and processing of imaging data

3D modeling of structures and artifacts

Main software used:

Adobe - Photoshop CS;

Adobe - Illustrator CS;

Corel

Gimp

MeshLab

INKSCAPE

AgiSoft

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Megalithic Culture (HIS10510M)

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Archaeology – Culture and Context (HIS10511M)

The telltale traces of human activity over time:

1. Prehistory old;
2. Prehistory recent;
3. Protohistory;
4. Roman period;
5. Medieval and modern period;
6. Contemporary period.

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Methods and Techniques of Archaeological Excavation (HIS10512M)

The different types of excavation: excavation of the survey area;

Excavations / polls minimization;

The Drawing Field;

Reports: text, maps, photographs, drawings, field

The scientific articles

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Archaeological Sites Descriptor - Methods and Techniques for Impact Assessment (HIS10513M)

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Religious and Artistic Heritage (HIS10514M)

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Research Dissertation / Internship Report I (HIS10515M)



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Geographic Information Systems and Heritage I (PAO10516M)

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Methods and Techniques of Archaeological Field Survey and Analysis I (HIS10517M)

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The History of Archaeology in Portugal I (HIS10518M)

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Introduction to Geological Materials (GEO10519M)

A. introductory issues

1. Geology, materials and archaeology
2. Earth systems
3. Properties of Minerals

Mineral identification by macroscopic methods

Petrographic Analyses

Physical Methods of Identification

Element Analyses

iv. Color of Minerals

B- Classification and identification of Rocks

1. Introduction
 2. Rock Classification and Properties
 3. Igneous Rocks
 - i. Magma and volcanism
 - ii. Color, Mineralogy and texture
 - iii. Extrusive Igneous Rocks
 - iv. Intrusive Igneous Rocks
 4. Sedimentary Rocks
 - i. Weathering, erosion, transport and deposition (or precipitation)
 - ii. Carbonate Sedimentary Rocks
 - iii. Terrigenous Sedimentary Rocks
 - iv. Surface Deposits and soils
 5. Metamorphic Rocks
 - i. Metamorphism
 - ii. Mineralogy and texture
 6. Ores
 - i. Metals and Related Minerals and Ores
 - ii. The more important mineral deposits in Portugal
- #### C. Products and raw materials
1. Lithic Materials
 2. Artificial rocks
- Binder and aggregates
3. Color and pigments
 4. Glass



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Research Dissertation / Internship Report II (HIS10520M)

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Laboratory and Desk-based Research in Archaeology (HIS10524M)

1. The different types of archaeological materials, from prehistory to the present.
2. Problems of treatment, conservation and restoration of archaeological materials;
3. Description and inventory. Construction of tables and typologies.
4. The graphic treatment of texts, drawings and archaeological materials.

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Archaeology Sub-Saharan Africa (HIS10525M)

1. The territory and the environment
2. Research methodologies
3. The African prehistory
4. The major civilizations
5. urbanism

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Former Ecology Elements (PAO10526M)

PART I Man as environmental changing agent

The Environment and the Man: the environment determinism.

Economics History and Ecology History: a complex inter-relation.

Nature resources exploitation, changing of nature and environmental impact.

Air, water and soil contamination: the first marks to an environmental impact history.

Technological evolution and risk management.

Cultural landscape 'production' as a result of eco- and anthroposystems dynamics.

The city rural areas traditional conflict.

PART II Environmental Archaeology basic elements

1. Perspectives of use of environmental archaeological information. {\}\newline
2. Basic techno-scientific domains and paleoenvironmental contribution: Geoarchaeology; Palynology; Carpology; Anthracology; Archaeozoology and Paleontology; Other domains {\}\newline
3. Some predictions on the future development of these analytic tools.



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Landscape Reading and Understanding (PAO10527M)

Modules: Natural Systems and Landscape, Landscape and Culture, Perception and Representation. Introduction to Landscape Research. The natural system and the complex relationships between various structural systems. Morphology of the landscape. Variations in spatial and temporal scale. Paradigm nature / culture. Anthropocentric dimension. Cultures and landscape construction. Systems, functions and uses. Relation between the concept of landscape and representation. Site, place and landscape. Reading and interpretation. The specificity of the landscape as an object of research. Interdisciplinary and contextualization. Attitude, innovation and creativity. Organization of research.

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Geographical Information Systems and Heritage II (PAO10528M)

Applications to heritage:

1. Acquisition and integration of heritage data in GIS;
2. Georeferencing vectors and rasters;
3. Elaboration of thematic maps;
4. Spatial analysis

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Methods and Techniques of Archaeological Field Survey and Analysis II (HIS10521M)

Practical work in the field, in order to identify structures and archaeological materials to improve methods and techniques learned in Unit I.

Using satellite guidance devices (GPS) guidance practice.

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Research Dissertation / Internship Report III (HIS10523M)

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Pre rural and protohistorical : structures and landscapes (HIS10529M)

1. implantation
 - a) The meanders of water lines
 - b) The natural shelters
 - c) The hills
 - d) The plains
 2. Defensibility of some local or not supported by defensive systems marked the landscape especially after the Neolithic.
 3. structures housing
- Understanding the various types of habitat taking into account their chronology and landscape where fall is the essence of this discipline program.

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The World Rural Roman and Post Roman : Structures and Landscapes (HIS10530M)



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Urban Archaeology (HIS10531M)

1. Urban Archaeology: the basics
2. The urban evolution: the Roman city to the contemporary city
 - 2.1. The city from the literature
 - 2.2. The archaeological record
3. The urban planning
4. The archaeological intervention
5. Security at work