

ECTS Information Package: Degree Programme

Master's Degree in

ARCHAEOLOGICAL TECHNIQUES

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A - General Description

Programme Title - Mestrado em Técnicas de Arqueologia

Qualification awarded - Master's Degree in Archaeological Techniques

Level of qualification - Second-cycle degree, EQF Level 7; ISCED Level 5

Specific admission requirements

General

According to the Portuguese Law, the following candidates are eligible for entry to the course of study leading to the *Mestre* degree:

- Holders of a *licenciado* degree or legally equivalent corresponding to the first cycle of higher education;
- Holders of a foreign higher degree awarded on completion of a first-cycle programme organised in the framework of the Bologna Process;
- Holders of a foreign higher degree which is deemed by the Technical-Scientific Committee of ESTT-IPT to meet the requirements of a *licenciado* degree.
- Holders of an academic, scientific or professional curriculum which is deemed by the Technical/Scientific Committee of ESTT-IPT as appropriate to access the programme.

Specific

Without prejudice to the general admission requirements, the following candidates are eligible for entry onto the master's programme in Archaeological Techniques:

- . Holders of a licenciado degree or legally equivalent qualification in archaeology, history, anthropology, biology, geology and related areas;
- . Holders of a foreign higher degree in the abovementioned areas awarded on completion of a first-cycle programme organised in the framework of the Bologna Process;
- . Holders of a foreign higher degree in the abovementioned areas which is deemed to meet the requirements of a licenciado degree by the ESTT/IPT Technical-Scientific Committee;
- . Holders of a bacharel degree in the abovementioned areas whose scientific and professional curriculum is deemed by the ESTT-IPT Scientific-Technical Committee as appropriate to access this course of study;
- . Holders of an academic, scientific or professional curriculum in the abovementioned areas which is deemed by the ESTT-IPT Scientific-Technical Committee as appropriate to access this course of study.

Specific arrangements for recognition of prior learning (formal, non-formal and informal)

General

Granting of credits from prior learning is regulated by the Portuguese Law taking into account the level of credits and the field of study where they have been earned and is subject to the recognition of ESTT-IPT Technical/Scientific Committee.

- Training undertaken in the context of other higher education programmes of study from national or foreign HE establishments or organised in the framework of the Bologna Process or other prior learning can be credited towards the present programme of study;
- Credits earned from postgraduate studies can also be credited towards this programme of study;
- Professional experience or other training, different from the abovementioned ones, can also be credited towards this programme of study.

Specific

Allocation of credits to individuals holding a licenciado degree in Archaeology or similar programs prior to the Bologna process with a duration equivalent to 300 ECTS credits (5 years of study) is formally analysed on a case-to-case basis.

Qualification requirements and regulations:

The master's degrees are governed by the Portuguese Law and applicable program regulations established by the School of Technology-IPT.

In order to complete this second-cycle degree it is necessary to accumulate 120 ECTS credits in two years as according to the course curriculum.

Each ECTS credit corresponds to 27 hours of work.

Profile of the program:

The programme complies with the Bologna requirements and is organised around 120 ECTS credits distributed as follows: taught component (70 ECTS credits, of which 10 may be replaced by self-study activities), field or laboratory work (8 ECTS credits) and Internship and final Report (42 ECTS credits).

Key learning outcomes:

Competences to be acquired by students comprise resolution of problems related with the sustainable exploitation and management of archaeological resources including:

- Identify and characterise archaeological sites and contexts in their environmental and cultural context contributing to a detailed survey of national archaeological resources;
- Provide the country with qualified human resources in areas of expertise supported by a network of laboratory infrastructures that may make use of them later;
- Identify archaeological resources and incorporate them in land planning programmes in order to attract investment and subsequent creation of workplaces and population settlement both at local and regional level;
- Be aware of the importance of enhancing and exploring archaeological resources as factors for profitability and minimization of negative impacts;
- Evaluate the scientific, didactic, patrimonial and cultural potential of areas of archaeological and landscape interest in order to use them as an instrument for regional promotion and development;
- Draw up archaeological/tourist tour guides to disseminate and promote the areas of interest;
- Draw up archaeological heritage risk maps for land planning;
- Use key computer and telematics tools in their different application domains.

Occupational profiles of graduates with examples:

Holders of the master's degree in Archaeological Techniques are prepared among others to perform as:

- Middle managers in public bodies, museums, municipalities, etc.);
- Collaborators or responsible for archaeological monitoring/intervention activities;
- Members of multidisciplinary teams working in laboratories engaged in the analysis of archaeological artifacts or ecofacts.

Access to further studies:

The master's degree in Archaeological Techniques gives access to third-cycle programs in the area of Archaeology, Anthropology, History and other related areas as according to applicable admission requirements.

Course structure diagram with credits

| Course Title | Year | Semester | Credits |
|--|------|----------|---------|
| Option - TAAR/GA/TSR/MD/GA | 1 | A | 0 |
| op: English | 1 | A | 3 |
| op: Portuguese | 1 | A | 3 |
| Bioarchaeology and Human Evolution | 1 | S1 | 6 |
| Cultural Heritage Management | 1 | S1 | 3 |
| European Prehistory | 1 | S1 | 3 |
| Excavation, recording and analysis methods | 1 | S1 | 3 |
| Geology of Continental Quaternary Formations | 1 | S1 | 3 |
| Landscape Plaeoecology | 1 | S1 | 3 |
| Lithic Technology and Typology | 1 | S1 | 3 |
| Museography | 1 | S1 | 3 |
| Prehistoric Art | 1 | S1 | 3 |
| Option BA | 1 | S2 | 0 |
| op: | 1 | S2 | |
| Option I | 1 | S2 | 0 |
| op: Contextualisation of Archaeological Sites | 1 | S2 | 3 |
| op: Stratigraphy and Palaeontology of the Quaternary | 1 | S2 | 6 |
| op: Geodiversity and Archaeological Heritage | 1 | S2 | 3 |
| op: Geomorphology | 1 | S2 | 3 |
| op: Sedimentology and Laboratory Analyses | 1 | S2 | 6 |
| op: Geoarchaeology Seminar | 1 | S2 | 6 |
| Option MM (year1/sem1 or sem2) | 1 | S2 | 3 |
| op: Intercultural Integration Module | 1 | S2 | 3 |
| Option TSR | 1 | S2 | 0 |
| op: | 1 | S2 | |
| Option V | 1 | S2 | 0 |
| op: | 1 | S2 | |
| Option - Field/Laboratory Activities | 2 | A | 8 |
| op: | 2 | A | |

(*) This course may not be available in certain academic years. Please confirm availability with the Erasmus coordinator.

Course structure diagram with credits (cont.)

| Course Title | Year | Semester | Credits |
|--------------------------------------|------|----------|---------|
| Option - Internship and Final Report | 2 | A | 42 |
| op: | 2 | A | |
| Option - Stand-Alone Activities | 2 | A | 10 |
| op: | 2 | A | |

(*) This course may not be available in certain academic years. Please confirm availability with the Erasmus coordinator.

Examination regulations, assessment and grading

General

Assessment of course units complies with the Academic Regulations in force at ESTT-IPT, except for the Dissertation, Project and Internship, to which apply the provisions set out in the regulations for the master's degrees offered by the ESTT-IPT.

- Dissertation, Project and Internship have only two assessment seasons and the students are free to choose only one.
- The assessment calendar for the Dissertation, Project and Internship is proposed by the Programme Coordinating Committee to the Technical/Scientific Committee at the beginning of each academic year.
- The general grade improvement scheme does not apply to the Dissertation, Project and Internship.

The overall grade of the master's programme is the arithmetic weighted average rounded off to the ones of the number of ECTS credits and the grades of the course units that form part of the programme of study.

The 10-20 mark expressed on a 0-20 scale is converted into its equivalent in the European grading scale with the awards Satisfactory, Good, Very Good or Excellent.

Specific

The students must develop an original project or undertake professional internship and associated report. Both the project and the internship report must be submitted for appreciation to an examination panel appointed for that purpose.

Graduation requirements:

Completion of the programme requires a pass in all its constituent modules including the preparation and public defence of project work or internship report so as to accumulate 120 ECTS credits, of which 95 are compulsory and 25 are to be selected among optional modules available in the curriculum in compliance with general and specific assessment regulations.

Mode of study:

Full- and Part time.

Program director or equivalente

Director: Pierluigi Rosina

Erasmus coordinator: Luiz Miguel Oosterbeek / Pierluigi Rosina

ECTS coordinator: Pierluigi Rosina

B - Description of individual course units

| | |
|---|---|
| Course unit title | English |
| Course unit code | 300872 |
| Type of course unit | Optional |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | Annual |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | Marta Margarida S. Dionísio de Azevedo |
| Learning outcomes of the course unit | Make the students aware of the need of the acquisition and improvement of a set of skills, both linguistic and sociocultural levels, within the English-speaking cultures to use it in a process of different communicative situations. |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | A2 Level according to the Common European Framework of Reference for Languages. |
| Recommended optional programme components | Not applicable. |
| Course contents | Themes: - A World of many Languages - The World of Technology - The Media and Global Communication - Young People in the Global Era |
| Recommended or required Reading | - Redston, C. e Warwick, L. e Young, A. e Clementson, T. (2008). <i>Face2face Intermediate</i> . Cambridge: Cambridge University Press |
| Planned learning activities and teaching methods | Theoretical and practical lessons where the students are asked to do exercises concerning the following skills: reading, listening, speaking and writing with implicit grammar. |
| Assessment Methods and criteria | - A test subordinated to the Program Contents = 80%; - Continuous assessment, including exercises and class participation (written and oral components) and attendance = 20%; |
| Language of Instruction | English |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|--|
| Course unit title | Portuguese |
| Course unit code | 300871 |
| Type of course unit | Optional |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | Annual |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | Maria da Conceição Correia S. Romana |
| Learning outcomes of the course unit | |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme componentes | Not applicable. |
| Course contentes | |
| Recommended or required Reading | |
| Planned learning activities and teaching methods | |
| Assessment Methods and criteria | |
| Language of Instruction | Portuguese Mentoring in English |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|--|
| Course unit title | Bioarchaeology and Human Evolution |
| Course unit code | 30083 |
| Type of course unit | Compulsory |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | First Semester |
| Number of ECTS credits allocated | 6 |
| Name of Lecturer(s) | Eugénia Cunha |
| Learning outcomes of the course unit | The students should be able to identify the main bones of the human skeleton, to interpret the human bones in archaeological contexts, be familiar and interpret the major events of the human evolutionary history and the human natural history. |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme components | Not applicable. |
| Course contents | INTRODUCTION TO HUMAN OSTEOLOGY. CONCEPTS OF TAPHONOMY. RECOVERY OF HUMAN REMAINS IN ARCHAEOLOGICAL CONTEXTS. DISCRIMINATION BETWEEN HUMAN AND NON-HUMAN BONES. SKELETAL RECONSTRUCTION. SPECIFIC DOMAINS: PALAEOPATHOLOGY. INTRODUCTION TO HUMAN EVOLUTION. THE EARLIEST HOMINIDS. THE FIRST AFRICAN DIASPORA. THE NEANDERTHALS. THE MODERN MAN'S ANCESTORS |
| Recommended or required Reading | - Jurmain, R.(2008). <i>Introduction to Physical Anthropology</i> . Wadsworth: NJ. |
| Planned learning activities and teaching methods | Oral presentation; observational analysis of osteological material and fossil moulds, powerpoint presentations. |
| Assessment Methods and criteria | Test. |
| Language of Instruction | Portuguese |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|--|
| Course unit title | Cultural Heritage Management |
| Course unit code | 30088 |
| Type of course unit | Compulsory |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | First Semester |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | Luiz Oosterbeek |
| Learning outcomes of the course unit | The students should have acquired general knowledge of cultural heritage management: plans, projects and actions. The HERITY system. Case study analysis. |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme components | Not applicable. |
| Course contentes | Part 1 - general concepts Part 2 – how to take action? Part 3 – specific cultural heritage issues Part 4 – heritage management Part 5 – project Part 6 – management plan Part 7 – Herity Part 8 – applications |
| Recommended or required Reading | |
| Planned learning activities and teaching methods | Lectures and interdisciplinary work. |
| Assessment Methods and criteria | Assignment and examination. |
| Language of Instruction | Portuguese Mentoring in English |
| Work placement(s) | Not applicable |

B - Description of individual course units

| | |
|---|--|
| Course unit title | European Prehistory |
| Course unit code | 30082 |
| Type of course unit | Compulsory |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | First Semester |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | Luiz Oosterbeek |
| Learning outcomes of the course unit | The course focuses on three main research areas: - Quaternary and human colonisation in Europe - Hunters-Gatherers Societies - The first farmers |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme components | Not applicable. |
| Course contents | 1. Quaternary and human colonisation in Europe 2. Controversies on evolutionary lineage 3. The human origins in Europe 4. Hunters-Gatherers Societies 5. The first producers 6. Models |
| Recommended or required Reading | - OOSTERBEEK, L.(1197). <i>Echos from the East : Late Prehistory of the North Ribatejo</i> . Tomar: CEIPHAR |
| Planned learning activities and teaching methods | Lectures supported by discussion and comparative text analysis. |
| Assessment Methods and criteria | Interdisciplinary work articulated with the Quaternary Geology module. Examination. |
| Language of Instruction | Portuguese |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|---|
| Course unit title | Excavation, recording and analysis methods |
| Course unit code | 30086 |
| Type of course unit | Compulsory |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | First Semester |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | Sara Cura |
| Learning outcomes of the course unit | The students will familiarise themselves with the practical and methodological aspects of excavation work as well as in-office and laboratory techniques based on the real excavation project in course at the archaeological site of Ribeira da Atalaia (Lower, Middle and Upper Palaeolithic) |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme componentes | Not applicable. |
| Course contentes | I – Research and fieldwork planning II – Lab and field methodology III – Logistics and budgeting IV – Excavation report V - Practical class at the Ribeira da Atalaia site. |
| Recommended or required Reading | |
| Planned learning activities and teaching methods | Theoretical and practical |
| Assessment Methods and criteria | Design a research or intervention plan for an archaeological site, region or archaeological collection (preferentially related with the thematic of the first essay) |
| Language of Instruction | Portuguese Mentoring in English |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|---|
| Course unit title | Geology of Continental Quaternary Formations |
| Course unit code | 30084 |
| Type of course unit | Compulsory |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | First Semester |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | Pierluigi Rosina |
| Learning outcomes of the course unit | On completion of this unit the students should be familiar with the chronology and chronostratigraphy of the Quaternary and its methods of study, be able to identify the continental sediment deposits; describe the geomorphological properties of the deposits and respective stratigraphic sequences;... |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme componentes | Not applicable. |
| Course contentes | Methods of study of quaternary events, geochronological elements, isotopic palaeoclimatology and palynological stratigraphy. Geomorphology and deposition on continental formations. Chronostratigraphy of continental and marine quaternary. Glaciations: causes and effects on Europe. Evolution of the physical environment and organisms in Europe. |
| Recommended or required Reading | |
| Planned learning activities and teaching methods | Theoretical-practical classes supported by case study analysis. |
| Assessment Methods and criteria | Practical coursework. |
| Language of Instruction | Portuguese Mentoring in English |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|---|
| Course unit title | Landscape Palaeoecology |
| Course unit code | 30085 |
| Type of course unit | Compulsory |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | First Semester |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | José Mateus / Paula Queirós |
| Learning outcomes of the course unit | On completion of the module the students should be familiar with the key aspects of landscape transformation processes. |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme components | Not applicable. |
| Course contents | A) Concepts of ecology B) Biogeography and Landscape Eco-Physiography C) World biomas D) Portuguese ecosystems E) Palaeoclimatology methods F) Palaeoclimatic and palaeoenvironmental evolution of the planet. G) Theoretical Palaeoecology and privileged study contexts H) Introduction to research in landscape palaeoecology I) Landscape evolution in Europe and Portugal J) Landscape Archaeology |
| Recommended or required Reading | |
| Planned learning activities and teaching methods | Lectures and field trips. |
| Assessment Methods and criteria | Test to be held after the Palaeoecology field trip. |
| Language of Instruction | Portuguese |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|--|
| Course unit title | Lithic Technology and Typology |
| Course unit code | 30087 |
| Type of course unit | Compulsory |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | First Semester |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | Sara cura |
| Learning outcomes of the course unit | The students should acquire basic skills that will enable them to study and analyse lithic remains. |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme components | Not applicable. |
| Course contentes | 1-Introduction 2-Lithic technology: raw materials; carving mechanics; percutors; carving techniques; carving accidents 3-Products, stages and processes:façonage /debitage 4-Study methods:typology, technology 5-Practical application of techniques and concepts |
| Recommended or required Reading | - MORAIS, J.(2007). <i>Tecnotipologia Lítica.</i> . Erechin: Habilis |
| Planned learning activities and teaching methods | Theoretica-practical sessions. |
| Assessment Methods and criteria | Practical assignment. |
| Language of Instruction | Portuguese Mentoring in English |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|--|
| Course unit title | Museography |
| Course unit code | 30089 |
| Type of course unit | Compulsory |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | First Semester |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | Luís Manuel Mota dos Santos Figueira |
| Learning outcomes of the course unit | Acquisition of instrumental skills (cognitive, methodological, technological and terminological) of interpersonal skills (team interaction and cooperation) and systemic skills (understanding, awareness and general and specific knowledge of the subject matter). |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme components | Not applicable. |
| Course contents | 1. Museology and Museography: historical framework and general considerations. 2. The museum construction as a way of imparting knowledge: potential and limits. 3. Practical component: implementation and evaluation of a museum development project (exhibition created for the purpose). |
| Recommended or required Reading | <ul style="list-style-type: none"> - VV, A.(1999). <i>Revista de Museologia – Arquitecturas para la mirada, nº 17, Junho</i>. Madrid: Asociación Española de Museólogos - Bessegato, M.(2004). <i>O património em sala de aula – Acções Educativas</i>. Santa Maria: Evangraf - Linares, J.(1994). <i>Museo, Arquitectura y Museografía</i>. Cuba: VEGAP - Vinson, I.(2001). <i>Heritage and museology: a new convergence</i>. Londres: Museum International |
| Planned learning activities and teaching methods | Traditional lectures and experimental study, research, literature review, and field trips. Practical work done individually or as part of a team. |
| Assessment Methods and criteria | Practical work and final exam. |
| Language of Instruction | Portuguese Mentoring in English |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|--|
| Course unit title | Prehistoric Art |
| Course unit code | 30081 |
| Type of course unit | Compulsory |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | First Semester |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | Maria Emília Simões Abreu |
| Learning outcomes of the course unit | On completion of the course the students should have acquired general knowledge of world prehistoric art, rock art and mobile art, all cultural eras and horizons as well as world sites. |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme componentes | Not applicable. |
| Course contentes | Introduction to prehistoric art. Characterisation of prehistoric art: rock art, mobile art, megalithic art. Stelae statues, sculpture and other art forms in prehistory. The history of discoveries and the first studies,theories and researchers. Geographic distribution. Rock art in the five continents. The concept of zones, areas, set and complex. Dating, study and analysis methods.... |
| Recommended or required Reading | - BAHN, P.(1998). <i>The Cambridge Illustrated History of Prehistoric Art</i> . Cambridge: Cambridge Universty Press |
| Planned learning activities and teaching methods | Theoretical and practical sessions supported by internet resources. |
| Assessment Methods and criteria | Monograph: Written part (50%) Oral presentation (50%) |
| Language of Instruction | Portuguese |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|---|
| Course unit title | Contextualisation of Archaeological Sites |
| Course unit code | 3008109 |
| Type of course unit | Optional |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | Second Semester |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | Pierluigi Rosina |
| Learning outcomes of the course unit | Students will familiarise themselves with the methods and techniques used in geo-archaeological analysis of archaeological contexts. |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme components | Not applicable. |
| Course content | Environmental and stratigraphical contexts. Sedimentary deposits: fluvial, lacustrine, cave fillings, etc. Paedogenesis alteration. Introduction to Geo-archaeology. Analysis methods in Earth science applied to archaeological sites. |
| Recommended or required Reading | |
| Planned learning activities and teaching methods | Theoretical-practical lectures supported by case study analysis. |
| Assessment Methods and criteria | Practical coursework. |
| Language of Instruction | Portuguese Mentoring in English |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|--|
| Course unit title | Geoarchaeology Seminar |
| Course unit code | 3008111 |
| Type of course unit | Optional |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | Second Semester |
| Number of ECTS credits allocated | 6 |
| Name of Lecturer(s) | Pierluigi Rosina |
| Learning outcomes of the course unit | Students should develop skills for undertaking practical work in one of the branches of geoarchaeology. |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme components | Not applicable. |
| Course contentes | Consolidation of geoarchaeological issues. Application of acquired concepts in individual or group practical work. Sediment transport, Miall facies, sources of materials and climatic indicators. |
| Recommended or required Reading | |
| Planned learning activities and teaching methods | Individual or group practical assignment undertaken with the tutor's guidance. |
| Assessment Methods and criteria | Evaluation of the work done during the seminar. |
| Language of Instruction | Portuguese Mentoring in English |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|---|
| Course unit title | Geodiversity and Archaeological Heritage |
| Course unit code | 300835 |
| Type of course unit | Optional |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | Second Semester |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | Pierluigi Rosina |
| Learning outcomes of the course unit | The students will be able to identify the geodiversity and archaeological heritage of an area; analyze the value and threats to geodiversity and archaeological heritage; analyze national and international measures undertaken to preserve geodiversity and heritage. |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme componentes | Not applicable. |
| Course contents | General overview: geodiversity and archaeological heritage; definitions. Value and threats to geodiversity and archaeological heritage. Geodiversity and archaeological heritage conservation and management. Articulating geodiversity and archaeological heritage. |
| Recommended or required Reading | - Gray, M.(2003). <i>Geodiversity</i> . (pp. 1-448). New York: Wiley & Sons |
| Planned learning activities and teaching methods | Field trips and lectures. |
| Assessment Methods and criteria | Continuous assessment: Evaluation of the fieldbook (90%) Class performance (10%) |
| Language of Instruction | Portuguese Mentoring in English |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|--|
| Course unit title | Geomorphology |
| Course unit code | 300836 |
| Type of course unit | Optional |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | Second Semester |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | Pierluigi Rosina |
| Learning outcomes of the course unit | Analysis of landscape and landforms. Identify the geodynamics processes, current and past, that have shaped the landscape. Be able to make direct observation of processes and landforms. Understanding the evolution of landscape. Identify geomorphic hazards and develop research work. |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme componentes | Not applicable. |
| Course contents | Geomorphology: object and methods. Fundamentals of relief analysis. Constitution and dynamics of the earth -from processes to form. Dynamic geomorphology: in situ alterations; forms and types of erosion. Rocks, structures and forms. Structural geomorphology: forms of relief and geology. Climate and forms. Portuguese geomorphology. |
| Recommended or required Reading | - Summerfield, M.(1991). <i>Global Geomorphology</i> . England: Pearson Educations Limited |
| Planned learning activities and teaching methods | Lectures and map reading exercises. |
| Assessment Methods and criteria | Practical coursework. |
| Language of Instruction | Portuguese Mentoring in English |
| Work placement(s) | Not applicable. |

B - Description of individual course units

| | |
|---|---|
| Course unit title | Sedimentology and Laboratory Analyses |
| Course unit code | 3008107 |
| Type of course unit | Optional |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | Second Semester |
| Number of ECTS credits allocated | 6 |
| Name of Lecturer(s) | Pierluigi Rosina Silvério Manuel Domingues Figueiredo |
| Learning outcomes of the course unit | The students should be able to understand the sedimentary processes and rock change and weathering, the diagenetic processes, identify the granulometry and nature of ballasts, be able to interpret sedimentary deposits and river dynamics. |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme componentes | Not applicable. |
| Course contentes | Rock classification. Sedimentary processes. Rock alteration and decay. The sedimentary rocks. Diagenetic processes. Granulometry. The properties of ballasts. Interpretation of sedimentary deposits. River dynamics. |
| Recommended or required Reading | - Ricci Lucchi , F.(1980). <i>Sedimentologia</i> . (Vol. 1 a 3). Bologna: CLUEB - Friedmann, G.(1978). <i>Priciples of sedimentology</i> .. (Vol. 1). Nova York: Ed. Wiley & Sons |
| Planned learning activities and teaching methods | Theoretical and practical classes. |
| Assessment Methods and criteria | Thematic report (50%) and final interdisciplinary exam (50%) |
| Language of Instruction | Portuguese Mentoring in Italian |
| Work placement(s) | Not applicable. |

B - Description of individual course units

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|---|---|
| Course unit title | Stratigraphy and Palaeontology of the Quaternary |
| Course unit code | 3008108 |
| Type of course unit | Optional |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | Second Semester |
| Number of ECTS credits allocated | 6 |
| Name of Lecturer(s) | Pierluigi Rosina Silvério Manuel Domingues Figueiredo |
| Learning outcomes of the course unit | On completion of this unit students will have understood the fundamentals of stratigraphy and chrono-stratigraphy of the quaternary. They will be familiar with the vertebrate evolution and be able to discriminate between Pleistocene and Holocene fauna. |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme components | Not applicable. |
| Course contentes | Concepts of stratigraphy. Chrono-stratigraphy of the Quaternary. Climatic variations. The ice ages. Palaeoclimatology of the Plio/Pleistocene. The Quaternary faunas. Introduction to Palaeontology. Vertebrate Palaeontology. Fossil records. Taxonomy. Fossilization processes and tafonomy. |
| Recommended or required Reading | - MALATESTA , A.(1985). <i>Geologia e paleobiologia dell'Era Glaciale</i> . (Vol. 1). S / L: La Nuova Italia Scientifica. - Benton, M.(2005). <i>Vertebrate Palaeontology</i> . (Vol. 1). Oxford: Blackwell Publishing - Cardoso, J.(1993). <i>Contribuição para o conhecimento dos grandes mamíferos do Plistocénico Superior de Portugal..</i> (Vol. 1). Oeiras: C. M. Oeiras - Figueiredo, S. e Sousa, F. (2003). <i>Elefantes Plistocénicos de Portugal</i> . (Vol. 1). Lisboa: CPGP |
| Planned learning activities and teaching methods | Theoretical and practical classes |
| Assessment Methods and criteria | Thematic report (50%) and final interdisciplinary exam (50%) |
| Language of Instruction | Portuguese Mentoring in Italian |
| Work placement(s) | Not applicable. |

B - Description of individual course units

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|---|--|
| Course unit title | Intercultural Integration Module |
| Course unit code | 300862 |
| Type of course unit | Optional |
| Level of Course unit | Second Cycle |
| Year of Study | First Year |
| Semester/Trimester when the course unit is delivered | Second Semester |
| Number of ECTS credits allocated | 3 |
| Name of Lecturer(s) | Luís Manuel Mota dos Santos Figueira |
| Learning outcomes of the course unit | Students should have a general overview of Portuguese Culture and its place in the global world. |
| Mode of delivery | Face-to-face |
| Prerequisites and co-requisites | Not applicable. |
| Recommended optional programme components | Not applicable. |
| Course contents | 1. Portuguese culture: origins and development. 2. Territory and geography. 3. Arts and forms of rural and urban life. 4. The country's economic approach. 5. Portuguese culture across the world: unity in diversity. 6. The cultural relations between Portugal and the rest of the World. 7. Visual Tour: slide commentary. 8. Discussion and evaluation. |
| Recommended or required Reading | - RIBEIRO, O.(1963). <i>Portugal, O Mediterrâneo e o Atlântico</i> . Lisboa: Sá da Costa Editora - AA, V.(1980). <i>Arquitectura Popular Portuguesa</i> . Lisboa: Associação dos Arquitectos Portugueses - MUNFORD, L.(1980). <i>Arte e Técnica</i> . Lisboa: Edições 70 - DIAS, P.(1986). (dir.), <i>História da Arte em Portugal</i> . Lisboa: Editorial Alfa |
| Planned learning activities and teaching methods | Presentation of powerpoint slides and discussion. |
| Assessment Methods and criteria | Assessment is continuous and based on class attendance. |
| Language of Instruction | Portuguese Mentoring in English |
| Work placement(s) | Not applicable. |

