Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

Subdivided Module Catalogue

for the Subject

Archaeometry

as a minor in a Bachelor's degree programme

(60 ECTS credits)

Examination regulations version: 2008
Responsible: Faculty of Arts, Historical, Philological, Cultural and Geographical Studies
Responsible: Institute of Ancient Cultures

Course of Studies - Contents and Objectives

The education of this course of study aims to the knowledge of all major sections of Archaeometry, focussing particularly to the methods and to the potential of Analytical and Geoarchaeological Archaeometry. Thereby the students are confronted exactly with those analytical and geoscientific methods which form a reasonable addition to the main subject of their studies, the »Ancient World Sciences«. The graduates are able to recognize problems and questions of this main subject which possibly can be solved by using methods of the Natural Sciences, and they know how these methods work.

The Bachelor of Art of the subsidiary subject Archaeometry is a reasonable addition to the qualification of the main subject Ancient World and therefore is an adequate preparation for entering the world of working. In practise, problems and questions of archaeologists and scientists of the Ancient World Sciences are more and more solved also by use of methods of the Natural Sciences. The BA degree in Archaeometry, however, can also be taken as a prerequisit for entering a subsequent MA-course.

The BA subsidiary subject Archaeometry aims to an education of Ancient World scientists (archaeologists) who, beside the classical methods of this subject, are able to build a bridge to the application of Natural Sciences methods. This may happen in the environment of scientific institutions like universities, but also in the context of preservation of historical monuments, archaeological excavations, handling ancient cultural subjects in general, as in museums.

Abbreviations used

Course types: **E** = field trip, **K** = colloquium, **O** = conversatorium, **P** = placement/lab course, **R** = project, **S** = seminar, **T** = tutorial, **Ü** = exercise, **V** = lecture

Term: **SS** = summer semester, **WS** = winter semester

Methods of grading: **NUM** = numerical grade, **B/NB** = (not) successfully completed

Regulations: **(L)ASPO** = general academic and examination regulations (for teaching-degree programmes), **FSB** = subject-specific provisions, **SFB** = list of modules

Other: **A** = thesis, **LV** = course(s), **PL** = assessment(s), **TN** = participants, **VL** = prerequisite(s)

Conventions

Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not creditable for bonus.

Notes

Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the method of assessment to be used in the current semester by two weeks after the start of the course at the latest and will communicate this in the customary manner.

Should the module comprise more than one graded assessment, all assessments will be equally weighted, unless otherwise stated below.

Should the assessment comprise several individual assessments, successful completion of the module will require successful completion of all individual assessments.

In accordance with

the general regulations governing the degree subject described in this module catalogue:

ASPO2007

associated official publications (FSB (subject-specific provisions)/SFB (list of modules)):

26-Mar-2009 (2009-15)

This module handbook seeks to render, as accurately as possible, the data that is of statutory relevance according to the examination regulations of the degree subject. However, only the FSB (subject-specific provisions) and SFB (list of modules) in their officially published versions shall be legally binding. In the case of doubt, the provisions on, in particular, module assessments specified in the FSB/SFB shall prevail.

The subject is divided into

Abbreviation	Module title	ECTS credits	Method of grading	page
Compulsory Courses (60 ECTS credits)				
04-Geo-Arch1-082-m01	Geoarchaeology 1	10	NUM	8
04-Geo-Arch2-082-m01	Geoarchaeology 2	10	NUM	9
04-Geo-Arch3-082-m01	Methods of Archeometry 1	10	NUM	6
04-Geo-Arch4-082-m01	Methods of Archeometry 2	10	NUM	7
04-Geo-Arch5-082-m01	Methods of Geoarcheology	10	NUM	5
04-Geo-Arch6-082-m01	Special topics in Archaeometry	10	NUM	10

Module title			Abbreviation
Methods of Geoarcheology			04-Geo-Arch5-082-m01
Module coordinator		**Module offered by**	
holder of the Chair of Physical Geography		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
10	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	undergraduate	--	

Contents

Field course: Basic principles of physical-geographical field, mapping and measuring method (geomorphology, soil geography, vegetation geography, hydro geography, climatology); 10 days of fieldwork. Practical exercise: data preparation, analysis and interpretation; Synthesis of partial results, visualisation and presentation of data with the help of the GIS discussion and the production of a final report.

Intended learning outcomes

Students dispose over the basic physical-geographical mapping, measurement and laboratory methods. They have skills of the difficulties of field, measurement and lab works and possess an overview of analysis and interpretation possibilities of the acquired field and lab data. They possess the visualisation and presentaion of geodata and have the ability of networked considerations and of discussing the results scientifically.

Courses (type, number of weekly contact hours, language — if other than German)

This module comprises 2 module components. Information on courses will be listed separately for each module component.

- 04-Geo-Arch5-1-082: P (no information on SWS (weekly contact hours) and course language available)
- 04-Geo-Arch5-2-082: S (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.

Assessment in module component 04-Geo-Arch5-1-082: Methodocial Basics of physical-geographical fieldwork, mapping and measurement

- 5 ECTS, Method of grading: numerical grade
- written report (approx. 15 pages)

Assessment in module component 04-Geo-Arch5-2-082: Processing, Analysis and Interpretation of data

- 5 ECTS, Method of grading: numerical grade
- talk (approx. 30 minutes) and written elaboration (approx. 20 pages); weighted 1:1

Allocation of places

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Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module title			Abbreviation
Methods of Archeometry 1			04-Geo-Arch3-082-m01
Module coordinator		**Module offered by**	
holder of the Chair of Geodynamics and Geomaterials Research		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
10	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	undergraduate	--	

Contents

Basic observations on minerals and rocks, which can be made in the field or on archaeological finds, buildings and which lead to a first material identification and interpretation, e.g. concerning the origin of materials. Subsequently, the classification of the most important sedimentary, igneous and metamorphic rock types will be elucidated and practised on the basis of their in the handpiece identifiable mineral existence and structure. In the next module section, students will be provided with theoretical and practical basics concerning small geophysical prospection. Nowadays, there hardly exist an archaeological excavation area, which is not explored with geophysical measurement methods.

Intended learning outcomes

Students are able to identify the most important mineral types and as far as possible, to outline and interpret the rock samples without analytical tools. Further, they dispose over the ability to evaluate the possibilities and necessity of individual geophysical measurement methods for an archaeological site, to understand the implementation and to evaluate the interpretation including the uncertainties correctly.

Courses (type, number of weekly contact hours, language — if other than German)

This module comprises 2 module components. Information on courses will be listed separately for each module component.

- 04-Geo-Arch3-1-082: Ü (no information on SWS (weekly contact hours) and course language available)
- 04-Geo-Arch3-2-082: Ü (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.

Assessment in module component 04-Geo-Arch3-1-082: Identification of Minerals and Rocks

- 5 ECTS, Method of grading: numerical grade
- written examination (30 minutes) or oral examination of one candidate each (30 minutes)

Assessment in module component 04-Geo-Arch3-2-082: Methods of applied Geoghysics

- 5 ECTS, Method of grading: numerical grade
- seminar paper (approx. 12 pages)

Allocation of places

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Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module title			Abbreviation
Methods of Archeometry 2			04-Geo-Arch4-082-m01
Module coordinator		**Module offered by**	
holder of the Chair of Geodynamics and Geomaterials Research		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
10	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	undergraduate	--	

Contents

Students will be provided with basics of microscopy of rock and mineral thin sections under the polarisation microscope. Furthermore, different essential methods concerning chemical, mineralogical and isotopic analysis of geomaterials will be explained in detail and, as far as possible, demonstrated in the lab practically.

Intended learning outcomes

According to their names, both module components focus on geological materials, however, the acquired techniques are of great significance for the general material study of archaeological buildings and findings. Students have the ability to examine the thin section of rocks as well as archaeological building material, mortar, ceramic, glasses etc. under the microscope. The same applies for the analytical laboratory methods. Students are able to identify issues and methods that are adequate for certain materials. They are also able to evaluate the methodological prerequisite, the study effort and the value of the achieved results. One method or another can be applied under tutelage independently.

Courses (type, number of weekly contact hours, language — if other than German)

This module comprises 2 module components. Information on courses will be listed separately for each module component.

- 04-Geo-Arch4-1-082: Ü + V (no information on SWS (weekly contact hours) and course language available)
- 04-Geo-Arch4-2-082: V + Ü (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.

Assessment in module component 04-Geo-Arch4-1-082: Microscopic petrography Microscopic petrography

- 5 ECTS, Method of grading: numerical grade
- written examination (30 minutes) or oral examination of one candidate each (30 minutes)

Assessment in module component 04-Geo-Arch4-2-082: Analysis of geomaterials Analysis of geomaterials

- 5 ECTS, Method of grading: numerical grade
- written examination (30 minutes) or oral examination of one candidate each (30 minutes) or presentation (30 minutes)

Allocation of places

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Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module title			Abbreviation
Geoarchaeology 1			04-Geo-Arch1-082-m01
Module coordinator		**Module offered by**	
holder of the Chair of Geodynamics and Geomaterials Research		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
10	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	undergraduate	By way of exception, additional prerequisites are listed in the section on assessments.	

Contents

Introduction to "basic geological processes of the Earth"; Introduction to the basics of an interdisciplinary collaboration between the "Classical Studies" and "Natural Sciences".

Intended learning outcomes

Students dispose over basics of the development and structure of the Earth, development and composition of minerals and rocks (also as essential material of archaeological findings) as well as processes of plate tectonics that characterised former habitats significantly. Moreover, students have acquired the basics of interdisciplinary collaboration between ancient civilisation studies and natural sciences in the archaeometry, particular concerning an analytical orientated archaeometry; they are familiar with essential analysis and dating methods.

Courses (type, number of weekly contact hours, language — if other than German)

This module comprises 2 module components. Information on courses will be listed separately for each module component.

- 04-Geo-Arch1-1-082: V + T (no information on SWS (weekly contact hours) and course language available)
- 04-Geo-Arch1-2-082: A (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.

Assessment in module component 04-Geo-Arch1-1-082: Introduction to physical geography 1: physical geology
Introduction to physical geography 1: physical geology

- 5 ECTS, Method of grading: numerical grade
- written examination (45 minutes)
- Other prerequisites: A basic knowledge of inorganic chemistry and physics is recommended.

Assessment in module component 04-Geo-Arch1-2-082: Introduction to archaeometry

- 5 ECTS, Method of grading: numerical grade
- written examination (30 minutes) or oral examination (30 minutes)
- Other prerequisites: A basic knowledge of inorganic chemistry and physics is recommended.

Allocation of places

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Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module title			Abbreviation
Geoarchaeology 2			04-Geo-Arch2-082-m01
Module coordinator		**Module offered by**	
holder of the Chair of Physical Geography		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
10	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	undergraduate	--	

Contents

Introduction to "Physical Geography": basics of exogenous dynamics and climatology.

Intended learning outcomes

Students dispose over the following skills: Basics of the system Earth, i.e. understanding of dominating processes on the Earth's surface that are driven by the geofactors rocks, relief, climate, soil, water, flora and fauna. They are decisive for the understanding of the structure, function and dynamics of the natural space and its anthropogenic transformation (i.e. the environment, which has been shaped from humans by land using, settlements, transport routes etc.).

Courses (type, number of weekly contact hours, language — if other than German)

This module comprises 2 module components. Information on courses will be listed separately for each module component.

- 04-Geo-Arch2-1-082: V + T (no information on SWS (weekly contact hours) and course language available)
- 04-Geo-Arch2-2-082: V + T (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.

Assessment in module component 04-Geo-Arch2-1-082: General Physical Geography 2 (Earth System: Climate System) General Physical Geography 2 (Earth System: Climate System)

- 5 ECTS, Method of grading: numerical grade
- written examination (45 minutes)

Assessment in module component 04-Geo-Arch2-2-082: General Physical Geography 3 (Earth System: Exogenic Dynamics) General Physical Geography 3 (Earth System: Exogenic Dynamics)

- 5 ECTS, Method of grading: numerical grade
- written examination (45 minutes)

Allocation of places

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Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module title			Abbreviation
Special topics in Archaeometry			04-Geo-Arch6-082-m01
Module coordinator		**Module offered by**	
holder of the Chair of Classical Archaeology		Chair of Classical Archaeology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
10	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	undergraduate	--	

Contents

The first module component will cover in-depth typical materials (rocks, minerals, glass, pottery, metal) concerning their origin, composition, production, analytics and archaeological message of archaeological finds or monuments. In the second module component, students are given the possibility to implement practical studies with archaeological issues according to their own wish or to participate in respective work placements.

Intended learning outcomes

Students dispose over consolidated knowledge of materials, which are important for Archaeology. Under tutelage, they are able to independently conceive, implement and evaluate certain scientific studies with archaeological issue or acquire certain methods during a work placement.

Courses (type, number of weekly contact hours, language — if other than German)

This module comprises 2 module components. Information on courses will be listed separately for each module component.

- 04-Geo-Arch6-1-082: S (no information on SWS (weekly contact hours) and course language available)
- 04-Geo-Arch6-2-082: P (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.

Assessment in module component 04-Geo-Arch6-1-082: Archäomaterialien

- 5 ECTS, Method of grading: numerical grade
- written examination (45 minutes) or oral examination (45 minutes)

Assessment in module component 04-Geo-Arch6-2-082: Practical Archaeometry

- 5 ECTS, Method of grading: numerical grade
- written report (10 to 15 pages)

Allocation of places

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Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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