

DOCTORAL SCHOOL OF EARTH SCIENCES⁴¹

Faculty of Science

Branch of sciences: earth sciences

Type of education: PhD education

Goal of education: preparing for obtaining PhD grade and gaining practice in teaching in higher education

Duration: 8 semesters

Type of training: full-time

Funding: state-funded or fee-paying training

Requirements for entering the PhD programme: MSc/MA degree and successful entrance examination

Requirement of language proficiency at entrance: type C language exam at medium level, recognised by the Hungarian state

The PhD programme ends with: final (pre-degree) examination ('abszolutórium')

Credits required for final (pre-degree) examination: 240

Credit types and modules: study credits, research credits, teaching credits

Professor in charge of training: József NEMES-NAGY, full professor, head of PhD school

⁴¹ Beiktatta a CCIX/2016. (IX.26.) Szen. sz. határozat.

DIVISION OF THE TRAINING PROGRAMME

General requirements and order of the training, including those of the complex examination and issues related to the doctoral process, are the same for everyone and recorded in the ELTE Doctorate Regulation, its appendix on the Faculty of Science, and the Operational Rules of the Doctoral School.

Basic requirements for each training phases are as follows:

- Education and research phase (4 semesters)
 - Credits to be gained: 108-132 (including 36 compulsory credits from courses and 2 compulsory credits from written report)
 - Complex examination
- Research and thesis writing phase (4 semesters)
 - Credits to be gained: 108-132

Requirements for applying for the doctoral process are: final (pre-degree) examination ('abszolutórium'); fulfilling the publication and language exam criteria set by the council of the doctoral school; submitting the proceedings of the 'internal defence' or an in-depth written opinion of the supervisor; and the PhD thesis.

CREDITS FOR ALL PROGRAMMES AND MODULES THAT CAN BE ABSOLVED DURING THE TRAINING

I. GEOGRAPHY-METEOROLOGY

Head of Programme: Prof. Mária Szabó

Training Module, courses (36 compulsory credits from courses in first 4 semesters):

FÖL/1/1 Regionális folyamatok a Balkánon

Regional processes in the Balkan

6 credits, practice, optional, non-repeatable

Language of course: H, E, G

FÖL/1/2 Etnikai földrajzi kutatások

Researches in ethnic geography

6 credits, practice, optional, non-repeatable

Language of course: H, E, G

FÖL/1/3 Történeti földrajz

Historical geography

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/1/4 A települési társadalmi környezet

Social environment of settlements

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/1/5 Intraurbán folyamatok

Intraurban processes

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/1/6 Regionális elemzési módszerek I.

Methods of regional analysis I.

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/1/7 Regionális elemzési módszerek II.

Methods of regional analysis II.

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/1/8 Társadalmi térelmélet

Social space theory

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/1/13 Geomorfológiai térképezés

Geomorphological cartography

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/14 Későglaciális–holocén környezetváltozás I.

Late Glacial and Holocene Environmental Change I.

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/15 Későglaciális–holocén környezetváltozás II.

Late Glacial and Holocene Environmental Change II.

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/16 Lössztratiográfia és negyedidőszaki környezetváltozások Magyarországon

Loess stratigraphy and Plesitocene environmental changes in Hungary

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

- FÖL/1/17 Pleisztocén éghajlatváltozások nyomai a löszökben**
Marks of Pleistocene climate change in loesses
6 credits, theoretical, optional, non-repeatable
Language of course: H, E
- FÖL/1/18 Új eredmények a vulkánmorfológiában I.**
New results in volcanomorphology I.
6 credits, theoretical, optional, non-repeatable
Language of course: H, E
- FÖL/1/19 Új eredmények a vulkánmorfológiában II.**
New results in volcanomorphology II.
6 credits, theoretical, optional, non-repeatable
Language of course: H, E
- FÖL/1/20 Paleomágneses kutatások a Kárpát-Pannon térségben**
Paleomagnetic researches in Carpathian-Pannonian Region
6 credits, theoretical, optional, non-repeatable
Language of course: H, E
- FÖL/1/21 Távérzékelési módszerek a természetföldrajzi kutatásokban**
Methods of Remote-sensing in physical geography
6 credits, theoretical, optional, non-repeatable
Language of course: H, E
- FÖL/1/22 Karsztos területek digitális domborzatelemzése**
Digital terrain analysis of karst areas
6 credits, theoretical, optional, non-repeatable
Language of course: H, E
- FÖL/1/24 Karsztos folyamatok modellezése**
Models of karst processes
6 credits, theoretical, optional, non-repeatable
Language of course: H, E
- FÖL/1/25 Az izotópegeokémia klímarekonstrukciós alkalmazásai**
Use of isotopegeochemistry in climate-reconstruction
6 credits, theoretical, optional, non-repeatable
Language of course: H, E
- FÖL/1/26 ICE AGE EARTH - Methods Reconstructing Quaternary Climate and Terrestrial Environments**
6 credits, theoretical, optional, non-repeatable
Language of course: E
- FÖL/1/27 Modellezés a természetföldrajzban**
Models in Physical Geography
6 credits, theoretical, optional, non-repeatable
Language of course: H, E

FÖL/1/33 A kutatási-fejlesztési tevékenység és a társadalmi-gazdasági fejlődés

R&D activities and development

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/35 Környezetpolitika (OECD, Kína)

Environmental policy (OECD, China)

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/36 Statisztikus klimatológia

Statistical climatology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/37 Klímaelmélet

Climate-theory

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/38 Elméleti meteorológia

Theoretical meteorology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/39 Mikrometeorológia

Micrometeorology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/40 Felhő és csapadékképződés mikrofizikája

Microphysics of cloud and wet fromation

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/41 Biofizikai modellezés a meteorológiában

Biophysical modelling in meteorology

6 credits, theoretical, optional, non-repeatable

FÖL/1/42 Levegőkémia

Atmospheric Chemistry

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/43 Dinamikai alapú ultrarövidtávú előrejelzés

Ultra short-term prognose on dynamic base

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/44 A Kárpát-medence élőhelydiverzitása – különös tekintettel a vizes élőhelyekre

Biodiversity of the wetlands in the Carpathian basin

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/46 A szél energetikai alkalmazásának földrajzi vonatkozásai

Geographical aspects of wind-energy

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/47 Földtudományi jelentőségű nemzeti parkok a Földön.

National parks of the Earth, with earth-science relevancy

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/48 A földtudományi természetvédelem

Natural protection in the earth sciences

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/49 Árvizek és árvédelmi stratégia a Kárpát-medencében

Floods, strategy of flood-prevention in the Carpathian basin

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/51 Felszínborítás-változás vizsgálatok távérzékeléses módszerekkel

Analysis of the land cover change with remote-sensing

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/52 Európai városfejlődés új folyamatai

New processes in the European urbanisation

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/53 A felhőképződés fizikája (A konvektív felhőképződés dinamikája)

Physics of cloud-formation

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/54 Bevezetés gyakorlati adatelemzésbe a földtudományok területén

Introduction to practical data analysis in the earth sciences

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/1/55 Légszennyezés meteorológia

Air pollution - meteorology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/56 Társadalmi térinformatika

Social GIS

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/1/57 A szárazföldi felszíni folyamatok biofizikai modellezése

Biophysical modelling in geomorphology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/58 A földrajztudomány története

History of Geography

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/59 Az információs társadalom terei

Spaces on information society

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/60 Magyarország településhálózatának történeti földrajza

Historical geography of the Hungarian settlement-set

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/62 Regionális modellek

Regional models

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/1/66 Az éghajlatváltozás vizsgálata globális klímamoddellel

Investigation of climate-change with global model

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/68 Fosszilis negyedidőszaki felszínformák értelmezése

Interpretation of fossile quaternary forms

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/69 A városföldrajz tudományelméleti és kutatás-módszertani kérdései

Theoretical and methodological questions in urban studies

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/71 A klímaváltozás földrajzi, környezetvédelmi és oktatási aspektusai

Geographical, environmental and educational aspects of the climate-change

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/72 Automatizálási lehetőségek a területi kutatásokban

Automatisation in regional research

6 credits, practice, optional, non-repeatable

Language of course: H, E, G

FÖL/1/74E A Mars földrajza és geológiája

Geography and geology of Mars

3 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/74GY A Mars földrajza és geológiája

Geography and geology of Mars

3 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/1/75 Bolygófelszínek térképezése

Cartography of planets

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/80 Talajdegradáció

Soil degradation

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/1/83 A felszín-légkör kölcsönhatások meteorológiai modellezésének története

History of meteorological modelling of surface-atmosphere interactions

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/84 Az etnikai földrajzi kutatások alapfogalmai és módszertana

Basic concepts and methods in ethnic geography

6 credits, theoretical, optional, non-repeatable

Language of course: H, E, G

FÖL/1/85 Talajképződés

Soil formation

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/86 A How to measure particle size and particle shape distribution at nano- micro and milimetre scale?

6 credits, practice, optional, non-repeatable

Language of course: E

FÖL/1/88 Evaluation of landscape change processes

6 credits, practice, optional, non-repeatable

Language of course: E

FÖL/1/89 Characteristics of Spatial Structure

6 credits, practice, optional, non-repeatable

Language of course: E

FÖL/1/90 Regional processes in Europe

6 credits, practice, optional, non-repeatable

Language of course: E

FÖL/1/91 GIS in socio-economic analysis

6 credits, practice, optional, non-repeatable

Language of course: E

FÖL/1/92 The spatial dimensions of the global economy

6 credits, practice, optional, non-repeatable

Language of course: E

FÖL/1/94A The geographies of socialism and post-socialism

6 credits, theoretical, optional, non-repeatable

Language of course: E

FÖL/1/95A Spatial disparity research

6 credits, theoretical, optional, non-repeatable

Language of course: E

FÖL/1/96 Energiatervezés

Energy planning

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/97N Urban Development, Urban Renewal in Hungarian Urban Network

6 credits, practice, optional, non-repeatable

Language of course: E, G

FÖL/1/97A Urban development, urban regeneration and the transformation of urban spaces in Hungary

6 credits, practice, optional, non-repeatable

Language of course: E

FÖL/1/98 Marginalizált társadalmi csoportok földrajza

Geography of marginalisation

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/99 A vidékföldrajz irányzatai

Streams in rural geography

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/100 A gazdaságföldrajz új irányzatai

New tendencies in economic geography

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/1/101 Várostervezés és fejlesztés

Urban planning and development

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/RK-KV Study in another institution of higher education, credit transfer

Credit can be gained from study in and credit transfer from another institution of higher education (authorised to offer PhD education) with previous allowance of the Council of the Doctorate School and after acceptance of the achievement proved with document. Courses offered by programmes of the Doctoral School of Earth Sciences or other Doctoral Schools at Eötvös Loránd University can be taken and absolved, in case they are relevant for the PhD student's research topic

Research module:

FÖL/K Steered research

1 credit/30 hours of work and studies absolved by the student, PhD research, obligatory, can be repeated

FÖL/EKK Individual research credit

FÖL/BESZ1 Compulsory report, 1st year

1 credit, report, obligatory, non-repeatable

FÖL/BESZ2 Compulsory report, 2nd year (in written form, requirement for the complex examination)

2 credits, obligatory, non-repeatable

FÖL/BESZ3 Compulsory report, 3rd year

3 credits, report, obligatory, non-repeatable

Teaching module (credits to be gained: 0 to 24):

FÖL/OKT Teaching activity

1 credit/1 hour per week, teaching, optional, can be repeated

II. GEOLOGY-GEOPHYSICS

Head of Programme: Prof. Andrea Mindszenty

Training Module, courses (36 compulsory credits from courses in first 4 semesters):

FÖL/2/1 Ostracodák gyűjtése, preparálása és vizsgálata

Collection, Preparation and Study of Ostracods

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/2 Őskörnyezeti metodikák

Methods of Palaeoenvironmental Studies

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/3 Ostracodák evolúciója a földtörténetben

Evolution of Ostracods

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/4A Az ostracodák paleoökológiája

Palaeo-ecology of Ostracods

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/5 Az ostracoda váz morfológiája

Morphology of Ostracod-shells

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/6 Ostracodák rendszertana

Taxonomy of Ostracods

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/7 Dendroklimatológia

Dendroclimatology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/8 Dendrogeomorfológia

Dendro-geomorphology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/9 A foraminiferák rendszertana

Taxonomy of Foraminifers

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/10 A foraminiferák morfológiája

Morphology of Foraminifers

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/11 Alkalmazott mikropaleontológia

Applied Micropaleontology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/12 Kréta palaeobiosztratigráfia, paleoökológia, paleoklimatológia

Cretaceous Palaeobiostratigraphy, Palaeo-ecology, Palaeoclimatology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/13 A geokémia mikropaleontológiai alkalmazása

Geochemical methods in Micropaleontology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/14 Tafonómia és szedimentológia

Taphonomy and Sedimentology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/15 Biosztratigráfiai metodikák

Methods of Biostratigraphy

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/16 Paleobiogeográfiai metodikák

Methods of Palaeobiogeography

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/17 Medencekutatás

Basin Research

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/18 Elméleti modellezések a karotázsban

Theoretical Modeling in Well-logging

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/19 Vetülettani alkalmazások

Application on Map Projections

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/20 Adatintegráció a térinformatikában

Data integration in GIS

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/21 Műholdas távérzékelés

Satellite-based Remote-sensing

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/22 A Pannon-medence jelenkori geodinamikája: vizsgálati módszerek és kutatási eredmények

Recent Geodynamics of the Pannonian Basin, Methodology, Results

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/23 Digitális domborzati modellek a földtudományban

Digital Terrain Models in Earth Sciences

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/24 Elektromágneses hullámterjedés I.

Electromagnetic Wave Propagation – I.

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/25 Elektromágneses hullámterjedés II.

Electromagnetic Wave Propagation – II.

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/26 Hullámterjedés

Wave Propagation

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/27 A felszínfejlődés numerikus modellezése

Surface process Modelling

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/28 Tetszőleges alakú jelek terjedése

Propagation of Waves in all form

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/29 A whistlerek vizsgálata, illetve szűrése

Study and Filtering of Whistlers

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/30 A Föld felső légkörének folyamatos monitorozása ULF, VLF jelekkel

Monitoring of the Upper Atmosphere by ULF and WLF signals

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/31 Kristályoptikai sajátságok meghatározása univerzális forgatóasztallal

Crystal optical measurements with the the Universal-stage

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/32 Kristályoptikai sajátságok meghatározása univerzális forgatóasztallal

Crystal optical measurements with the the Universal-stage

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/33 Nezo-, fillo és tektoszilikátok kristálykémiaja, genetikája

Crystal Chemistry and Genetics of neso-, phyllo- and ecto silicates

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/34 Magmás kőzetek járulékos ásványai

Acessory minerals in igneous rocks

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/35 A röntgen pordiffrakció gyakorlati alkalmazásai

X-ray Powder Diffraction Analysis

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/36 A röntgen pordiffrakció analízis I-II.

Xray Powder Diffraction Phase Analysis I_II

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/37 A Rietveld módszer és ásványtudományi alkalmazásai

The Rietveld-method and its Application in Mineralogy

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/38 Petrográfiai módszerek alkalmazása a régészeti kerámiák kutatásában

Petrographical methods in the study of archaeological ceramics

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/39 Kőzettani és geokémiai vizsgálati módszerek alkalmazása a kerámia kutatásban

Petrographical and Geochemical Methods in Ceramics Research

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/40 Proveniencia vizsgálatok az archeometriában

Provenance Studies in Archaeometry

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/41 Sziliciklasztos kőzetek lehordási területének jellemzése kőzettani és geokémiai módszerekkel

Provenance of Siliciclastics – Petrographical and Geochemical Methods

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/42 Mállási viszonyok geokémiája

Geochemistry of Weathering

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/43 Szakgyűjteményi anyagvizsgálat

Materials Testing of Mineral Collections

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/44 Fejezetek a fizikai vulkanológiai vizsgálatokból

Introduction to Physical Volcanological Studies

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/45 Magmás petrogenetikai modellezés

Geochemical modelling of igneous processes

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/46 A Mediterrán-térség neogén-kvarter-recens vulkanizmusa

Neogene-Quaternary to Recent Volcanism of the Mediterranean

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/47 Petrography of archeological building stones

6 credits, theoretical, optional, non-repeatable

Language of course: E

FÖL/2/48 Magmás kőzetek mállásának petrográfiai vizsgálata

Petrographical study of the weathering of igneous rocks

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/49 Mikromineralógia ásványkémiai vonatkozásai

Mineral chemical implications of micromineralogy

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/50 Ofiolitok petrografiája

Ophiolite petrography

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/51 Törmelékes kőzetek mikromineralógiája

Micromineralogy of clastic rocks

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/52 Speciális mikroszkópi vizsgálati módszerek

Special microscopical methods

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/53 Fluidumok a Földben

Fluids in the Earth

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/54 Fluidumok a Földben

Fluids in the Earth

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/55 Bazalt és fázisdiagramjai

Basalts and their phase diagrams

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/56 A szubdukált lemez és a köpenyék

Subducted lithospheric plates and the mantle-wedge

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/57 A gránát jelentősége a metamorf és magmás kőzetek petrogenézisében

The significance of garnet in metamorphic and igneous petrogenesis

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/58 Hidrotermális ércképződés

Hydrothermal ore-mineralization

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/59 Magmás-metamorf ércképződés

Igneous and metamorphic ore-mineralization

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/60 A lemeztectonika és ércképződés

Plate tectonics and the formation of ore deposits

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/61 Folyadékzárvány vizsgálatok

Fluid inclusion studies

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/62 Opakoptikai vizsgálatok

Opaque optics

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/63 Kőzetalkotó ásványok kristálykémiaja

Crystal chemistry of rockforming minerals

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/64 Elektronmikroszkópos anyagvizsgálási módszerek

Methods of electron-microscopy

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/65 Újabb eredmények a rétegszilikátok/agyagásványok kutatásában

Latest results in the study of layer-silicates/clay minerals

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/66 Korszerű kristálytan és kristályszerkezet-vizsgálási módszerek

Modern Crystallography, Methods of Study of Crystal Structures

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/67 A víz és a mélyépítés konfliktusai. Építőmérnöki esettanulmányok

Conflicts of groundwater and civil engineering (Case-studies)

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/68 Travertino-szedimentológia és mikropetrográfia

Sedimentology and micropetrography of travertines

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/69 Paleokarszt-jelenségek geológiája

Geology of Paleokarst

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/70 Paleotalajtan

Palaeopedology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/71 Szeizmikus szekvencia sztratigráfia

Seismic Sequence Stratigraphy

3 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/72 Szeizmikus szekvencia sztratigráfia

Seismic Sequence Stratigraphy

3 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/73 Közgazdasági földtan

Economic Geology

3 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/74 Közgazdasági földtan

Economic Geology

3 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/75 Földi üledékes medencék és szénhidrogén rendszereik

Great Sedimentary Basins and Hydrocarbon Systems

3 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/76 Földi üledékes medencék és szénhidrogén rendszereik

Great Sedimentary Basins and Hydrocarbon Systems

3 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/77 Felszín alatti vizek gravitációs áramlásrendszerei: alapfogalmak, vizsgálat, és felhasználás

Gravitationally controlled Groundwater Flow Systems

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/78 Felszín alatti vizek gravitációs áramlásrendszerei: alapfogalmak, vizsgálat, és felhasználás

Gravitationally controlled Groundwater Flow Systems

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/79 Hidrogeológiára alkalmazott geofizikai módszerek: elmélet és terepgyakorlat

Geophysical Methods in Hydrogeology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/80 Hidrogeológiára alkalmazott geofizikai módszerek: elmélet és terepgyakorlat

Geophysical Methods in Hydrogeology

3 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/81 Karsztrendszerek környezeti érzékenysége, sérülékenysége

Sensitivity and Vulnerability of Karst Systems

3 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/82 Karsztrendszerek környezeti érzékenysége, sérülékenysége

Sensitivity and Vulnerability of Karst Systems

3 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/83 Termálvizek és geotermia

Thermal waters and Geothermics

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/84 Uránsoros korhatározás

U-Series dating

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/85 Sziliciklasztos kőzetek petrográfiája

Siliciclastic Petrography

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/86 Szakgyűjteményi anyagvizsgálat (II.)

Materials Testing in Mineral Collections -II

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/87 Mállott üledékes kőzetek leírása

Description of weathered sedimentary rocks

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/88 Endemikus fejlődés a hosszú életű tavakban

Endemic evolution in long-lasting perennial lakes

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/89 Dinaridák Hellenidák földtana

Geology of the Dinarids and Hellenids

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/90EA Szénhidrogén rendszer, play és prospekt analízis

Analysis of Hydrocarbon Systems, Plays and Prospects

2 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/90GY Szénhidrogén rendszer, play és prospekt analízis

Analysis of Hydrocarbon Systems, Plays and Prospects

4 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/91 Sótektonika

Salt tectonics

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/92 Ofiolitok kőzettana

Petrology of Ophiolites

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/93 A bioszféra történetének kulcsfontosságú eseményei

Key Events of the History of the Biosphere

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/94 Fosszilis hüllők vázmorfológiája

Skeletal Morphology of Fossil Reptiles

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/95 Fosszilis hüllők paleobiogeográfiája

Palaeobiogeography of Fossil Reptiles

6 kredit, előadás, választható, nem ismételhető

Language of course: H, E

FÖL/2/96 Miocén palaeobiosztratigráfia, palaeökológia, paleoklimatológia

Miocene Palaeobiostratigraphy, Palaeo-ecology and Palaeo-climatology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/97 Pattintott kőszköz nyersanyagok a Kárpát-Pannon Régióban

Palaeolithic Stone Materials in the Carpathian Pannonian Region

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/98 Kétéltűek anatómiája és vázmorfológiája

Anatomy and Skeletal Morphology of Amphibians

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/99 Laterites – Soils or Sedimentary Rocks?

Laterites – Soils or Sedimentary Rocks?

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/100 Hüllők rendszere

Taxonomy of Reptiles

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/101 Fejezetek a környezeti geokémia tárgyköréből

Introduction to Environmental Geochemistry

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/102 Fejezetek a metamorfózis tárgyköréből

Metamorphic Petrology

6 credits, theoretical, optional, non-repeatable

FÖL/2/103 Fejezetek a meteoritika tárgyköréből

Meteorites – an Overview

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/104 A belső földövek metamorf kőzettana

Metamorphic Petrology of the Earth's interior

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/105 A Kárpát-Pannon-térség fejlődése a terciérben

Tertiary Evolution of the Carpathian-Pannonian Region

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/106 Hogyan publikáljunk?

How to write scientific papers?

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/107 Földköpeny konvekció I.

Mantle convection-I

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/108 Karbonátos ciklusok és ciklus-sztratigráfia

Carbonate-cycles and cyclostratigraphy

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/109 Korszerű analitikai módszerek a geokémiai kutatásban

Modern analytical methods in Geochemistry

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/110 Advanced Igneous Petrology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/111 A Dunántúli-középhegység rendhagyó sajátossága: északi- és dél-alpi jura és kréta képződmények egy egységben

The unusual structure of the Transdanubian Range

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/112 Földköpeny konvekció II.

Mantle convection-II

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/113 A Kárpátok és a Kárpát-medence morfogenetikai karsztípusai

Morphogenetic karst types of the Carpathians and the Carpathian Basin

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/114 Klimatikus karsztmorfológia

Climatic Karst Morphology

6 kredit, elmélet, választható, nem ismételtető

Language of course: H, E

FÖL/2/115 Korszerű analitikai módszerek a geokémiai kutatásban

Modern Analytical Methods in Geochemistry

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/116 Kozmopetroológia

Cosmopetrology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/117 Ásványi nyersanyagok története 1. – Ásványok

The History of Mineral Resources 1. - Minerals

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/118 Ásványi nyersanyagok története 2. – Kőzetek

The History of Mineral Resources 2.- Rocks

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/120 Petroleum system modellezés PetroMod szoftverrel

Modeling of Petroleum Systems with PetroMod software

3 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/121 Petroleum system modellezés PetroMod szoftverrel

Modeling of Petroleum Systems with PetroMod software

3 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/122 Fejezetek a földköpenyben zajló konvekció témaköréből

Mantle Convection – Selected Examples

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/123 Kétéltűek rendszere

Taxonomy of Amphibians

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/124 Az emlősök rendszere

Taxonomy of Mammals

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/125 Emlősök vázmorfológiája

Skeletal Morphology of Mammals

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/126 Emlősök paleoökológiája

Palaeoecology of Mammals

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/127 Kagylók és csigák paleoökológiája

Palaeoecology of Bivalves and Gastropods

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/128 Pásztázó elektronmikroszkópia és elektronsugaras mikroanalízis a földtudományokban

Scanning Electron Microscopy and Electron Probe Microanalysis in the Earth Sciences

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/129 Őslénytani adatelemzés

Data Analysis in Palaeontology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/130 Emelt szintű karbonátos mikrofácies-elemzés

Advanced Carbonate Microfacies Analysis

3 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/131 Földmágneses anomáliák értelmezése

Interpretation of Geomagnetic Anomalies

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/132 Ásványi nyersanyagok kulturtörténete 3. Mesterséges anyagok

The History of Mineral resources- 3. Artifacts

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/133 Petroleum system analysis

6 credits, practice, optional, non-repeatable

Language of course: E

FÖL/2/134 Karbonátszedimentológia és fácieselemzés

Carbonate Sedimentology and Facies Analysis

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/135 Agyagásványok a földtani folyamatokban

Clay Minerals in Geology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/136 Raman-spektroszkópia a földtudományokban

Raman-spectroscopy in Earth Sciences

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/137 A Dunántúli-középhegység fácies-kapcsolatrendszere a kora-kréta idején

Facies-connections of the Transdanubain Range in Early Cretaceous times

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/138 A Darwin-atoll – mecseki típusú atoll: közös sajátosságok, különbségek

The Darwin-atoll – an example from the Mecsek Range

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/140 Magyarország szerkezeti elemei, elemzésük és fejlődéstörténetük

Structural elements of Hungary – Analysis and History

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/144 Gázok az üledékes medencékben

Gases in Great Sedimentary Basins

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/145 Dolomitképződés

Dolomitization

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/146 Bevezetés a szeizmikus geomorfológiába

Introduction to Seismic Geomorphology

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/147 Nukleáris elemanalitikai módszerek és alkalmazásaik a földtudományi és archeometriai kutatásokban I.

Nuclear Analytical Methods and their Application to Earth Sciences and Archaeometry-I.

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/148 Nukleáris elemanalitikai módszerek és alkalmazásaik a földtudományi és archeometriai kutatásokban II.

Nuclear Analytical Methods and their Application to Earth Sciences and Archaeometry-II.

6 credits, practice, optional, non-repeatable

Language of course: H, E

FÖL/2/149 Fluid-kőzet kölcsönhatási folyamatok

Fluid-Rock Interaction

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/150 Applied Geology Seminars

3 credits, theoretical, optional, non-repeatable

Language of course: E

FÖL/2/151 A szerves kőzetan alapjai és földtani alkalmazása

6 credits, theoretical, optional, non-repeatable

Language of course: H

FÖL/2/152 Organic Petrography – Basics and Applications

6 credits, theoretical, optional, non-repeatable

Language of course: E

FÖL/2/153 Seminar on Basin Hydrodynamics

6 credits, theoretical, optional, non-repeatable

Language of course: E

FÖL/2/154 A Dunántúli-középhegység, mint az alpi hegységrendszer rendhagyó mezozoos szerkezeti felépítménye

The Transdanubian Range as an extraordinary structural unit of the Alpine Edifice

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/2/155 Turning points, crisessituations in the Earth history

6 credits, theoretical, optional, non-repeatable

Language of course: E

FÖL/2/157 Advanced geochronology

6 credits, theoretical, optional, non-repeatable

Language of course: E

FÖL/2/158A Transmission electron microscopy practice

6 credits, practice, optional, non-repeatable

Language of course: E

FÖL/RK-KV Study in another institution of higher education, credit transfer

Credit can be gained from study in and credit transfer from another institution of higher education (authorised to offer PhD education) with previous allowance of the Council of the Doctorate School and after acceptance of the achievement proved with document. Courses offered by programmes of the Doctoral School of Earth Sciences or other Doctoral Schools at Eötvös Loránd University can be taken and absolved, in case they are relevant for the PhD student's research topic.

Research module:

FÖL/K Steered research

1 credit/30 hours of work and studies absolved by the student, PhD research, obligatory, can be repeated

FÖL/EKK Individual research credit

FÖL/BESZ1 Compulsory report, 1st year

1 credit, report, obligatory, non-repetable

FÖL/BESZ2 Compulsory report, 2nd year (in written form, requirement for the complex examination)

2 credits, obligatory, non-repetable

FÖL/BESZ3 Compulsory report, 3rd year

3 credits, report, obligatory, non-repetable

Teaching module (credits to be gained: 0 to 24):

FÖL/OKT Teaching activity

1 credit/1 hour per week, teaching, optional, can be repeated

III. CARTOGRAPHY - GEOINFORMATICS

Head of Programme: Prof. László Zentai

Training Module, courses (36 compulsory credits from courses in first 4 semesters):

FÖL/3/1 Térképszerkesztés – tervezés

Map design and editing

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/2 Tematikus kartográfia

Thematic cartography

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/3 Térképvetületek a térinformatikában I.

Map projections in GIS 1

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/4 Kartográfia történeti kutatás

Research on the history of cartography

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/5 A térképészeti modellezés alapjai (A térkép modelltulajdonsága)

Fundamentals of Cartographic Modelling

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/6 A földrajzi térképek optimális vetületei 1.

Optimal projections of geographic maps 1

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/7 Output-orientált digitális kartográfia 1.

6 credits, theoretical, optional, non-repeatable

Language of course: H

FÖL/3/7A Output-oriented digital cartography 1

6 credits, theoretical, optional, non-repeatable

Language of course: E

FÖL/3/8 Digitális szűrési módszerek a térinformatikában

Digital filtering methods in GIS

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/9A Map-based animations on the Web

6 credits, theoretical, optional, non-repeatable

Language of course: E

FÖL/3/10 Magyar földrajzi nevek idegen nyelven

Hungarian geographic names on foreign languages

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/11 Földtani térképezés

Geological mapping

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/12 Fejezetek a földrajzi névírásból

Chapters on Geographic names

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/13 Magyarország topográfiai térképsorozata az I. katonai felméréstől 1950-ig

Hungarian topographic maps since the First Military Survey to 1950

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/14 Magyar térképészet 1528-1709

Hungarian cartography 1528-1709

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/15 Térkép alapú informatika földtudományi alkalmazása

Application of map-based informatics in earth sciences

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/16 A térképészet tudománytörténete

Cartography in the History of science

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/17 Térképek a környezettudományokban

Maps in environmental sciences

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/18 Térinformatikai alkalmazások

GIS softwares

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/19 Műholdas navigáció

Satellite navigation systems

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/20 Kartográfiai paradigmák

Cartographic paradigms

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/21 Térképészeti animációk a weben II.

Map-based animations on the web 2.

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/22 Térképszerkesztés, -tervezés II. (Földgömbök)

Map design and editing II (Globes)

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/23 Output orientált digitális kartográfia 2.

Output-oriented digital cartography 2.

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/25 A térképnymtatás művészete – a nyomtatási technológiák kialakulása

The art of map printing – development of printing technologies

6 kredit, elmélet, választható, nem ismételt

Language of course: H, E

FÖL/3/26 Térképvetületek a térinformatikában 2.

Map projections in GIS 2

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/27 A földrajzi térképek optimális vetületei 2.

Optimal projections of geographic maps 2

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/28A The GIS background of 3D geological modelling

6 credits, theoretical, optional, non-repeatable

Language of course: E

FÖL/3/29A New technologies in webcartography

6 credits, practice, optional, non-repeatable

Language of course: E

FÖL/3/30PA High precision GNSS measurements

6 credits, practice, optional, non-repeatable

Language of course: E

FÖL/3/30E Reneszánsz kozmográfia és kartográfia

Renaissance Cosmography and Cartography

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/3/31A Cognitive cartography and geovisualization

6 credits, practice, optional, non-repeatable

Language of course: E

FÖL/3/32 Tematikus térképek a térinformatikában

Thematic maps in GIS

6 credits, theoretical, optional, non-repeatable

Language of course: H, E

FÖL/RK-KVStudy in another institution of higher education, credit transfer

Credit can be gained from study in and credit transfer from another institution of higher education (authorised to offer PhD education) with previous allowance of the

Council of the Doctorate School and after acceptance of the achievement proved with document. Courses offered by programmes of the Doctoral School of Earth Sciences or other Doctoral Schools at Eötvös Loránd University can be taken and absolved, in case they are relevant for the PhD student's research topic

Research module:

FÖL/K Steered research

1 credit/30 hours of work and studies absolved by the student, PhD research, obligatory, can be repeated

FÖL/EKK Individual research credit

FÖL/BESZ1 Compulsory report, 1st year

1 credit, report, obligatory, non-repetable

FÖL/BESZ2 Compulsory report, 2nd year (in written form, requirement for the complex examination)

2 credits, obligatory, non-repetable

FÖL/BESZ3 Compulsory report, 3rd year

3 credits, report, obligatory, non-repetable

Teaching module (credits to be gained: 0 to 24):

FÖL/OKT Teaching activity

1 credit/1 hour per week, teaching, optional, can be repeated

Course free from the programmes (in studies module):

FÖL/KVE Scientific course in foreign language held by foreign guest lecturer

6 credits, theory, optional, can be repeated

REQUIREMENTS FOR AND CONTENT OF THE COMPLEX EXAMINATION

The applicant shall attach to the application for the complex examination a factual summary of the study and research achievements that can be approved in the doctorate training, and the applicant's research plan.

The applicant has to pass oral examination in two subjects from the list below (categorised by research programmes), which are related to the research topic. These are selected on basis of the PhD student's suggestion by the Council of the Doctoral School, which puts it forward to the Disciplinary

Doctoral Council. Both subjects have the same weight in evaluation. Suggested duration of the complex examination, including both subjects, is 120 minutes.

The complex examination is evaluated and its theoretical part is taken into consideration in the final grade of the PhD according to the appendix for the Faculty of Science in the University Doctoral Regulation. The sum of the two grades gained for both subjects of the complex examination is expressed in percentage of the maximal value (10) and is converted to a four-grade scale.

SUBJECTS OF THE STUDY PART OF THE COMPLEX EXAMINATION

Geography:

- General physical geography
- General human geography
- Physical geography of Hungary and the Carpathian Basin
- Human geography of Hungary
- Regional physical geography
- Regional human geography
- Urban and regional development
- Environmental geography
- Regional science
- Urban geography
- History of geography
- Methods of teaching geography
- Ecology
- Landscape ecology
- Political geography
- Urban sociology
- Quaternary geography
- Soil science, soil geography
- GIS
- Methods of regional analysis

Meteorology:

- Theoretical meteorology
- Theoretical climatology
- Atmospheric physics
- Synoptic meteorology
- Meteorology of environmental protection
- Atmospheric chemistry
- Dynamic modelling

- Agrometeorology
- Numerical prediction
- Satellite meteorology
- Climatology
- Hidrometeorology
- Micrometeorology

Geology and geophysics:

- Petrology
- Geochemistry
- Mineralogy
- Ore geology
- Paleontology
- Paleobotany
- History of Earth
- Stratigraphy
- General geology
- Sedimentology
- Regional geology
- Geodynamics
- Environmental geology
- Hydrocarbon geology and basin analysis
- Hydrogeology
- Geomathematics and geostatistics
- Geophysics (Gravity, Physical Geodesy, Geomagnetism, Seismology, Geothermics)
- Mechanical structure, materials and dynamics of the Earth
- Applied geophysics (near-surface geophysics)
- Geophysical well-logging
- Geomagnetism and the physics of the Upper Atmosphere
- Geophysical methods in Geology

Cartography and geoinformatics:

- Map design and map-making
- Thematic cartography
- Computer assisted cartography
- Map projection
- Topography
- Geoinformatics
- History of cartography
- Topographic map systems

- Atlas cartography
- Toponymy
- Remote sensing

CRITERIA FOR THE 'THESIS PART' OF THE COMPLEX EXAMINATION

- Identify research fields and open questions, where you have achieved or plan to achieve new results. Give an overview about the current stand of research in the given domain.
- They have to summarise so-far results and the content of publications substantiating these.
- They have to present the research and publication plan for the next two years.

SYSTEM OF CONTROLLING ACHIEVEMENTS

The PhD student has to absolve at least 20 credits in each semester.

Study credits can be gained in the study and research phase before the complex examination. Attending one course and absolving the examination it includes as well as fulfilling other criteria of accomplishment is worth of 3 credits. The accomplishment of a course is evaluated by its lecturer on a five-grade scale (1, 2, 3, 4, 5) and recorded in the Neptun system. The first two semesters are valid in case the PhD student gains at least 6 study credits in each semester. Maximum 50 % of the study credits can be absolved by credit transfer.

Research activities are marked by the supervisor on a three-grade scale (excellent, satisfactory, fail). Credit values are put forward by the supervisor (proportionate to worktime spent on research). The PhD student's publication activity can be evaluated in this category.

Research credits can be gained for a successful accomplishment of public reports, for maximum 6 credits in the study phase.

Research credits are certified by the head of PhD programme in the Neptun system.

Teaching activities are to be evaluated on a three-grade scale (excellent, satisfactory, fail). During the whole PhD training a maximum of 24 credits can be gained for teaching activities. Teaching activity embraces holding seminars, practices and field trips, and participation in laboratory teaching.