ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

STUDENT REGULATIONS OF THE 2ND DEGREE PROGRAM IN

GEOLOGY AND TERRITORY (LM-74)

Bologna Campus

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Second Cycle Degree Programme in Geology and Territory

Art. 1 Admission requirements

Admission to the 2nd cycle degree programme in Geology and Territory is subject to the possession of a three-year university degree or other suitable qualification obtained abroad. Moreover, candidates must meet the curricular requirements, personal competences and skills. The programme is organized in three different curricula: A) *Rischio geologico e protezione dell'ambiente*, B) *Stratigrafia integrata per le georisorse* and C) Raw Materials Exploration and Sustainability – RaMES. RaMES provides knowledge and competences on raw materials and the tenets of the circular economy, aiming at educating geologists and engineers with an entrepreneurial mindset.

In order to successfully attend the second cycle degree in Geology and Territory, the candidate needs to have basic knowledge of math, chemistry, physics and geology, with particular focus on:

- competences in chemistry, physics, math and informatics which represent a solid scientific cultural background and specifically the ability to describe and interpret geological processes;
- competences in Earth Sciences necessary to understand the theory and practical outcomes of the evolution of the planet;
- knowledge of methods and practices necessary for outdoor, laboratory and on the field training activities aimed at geological analysis;
- ability to work in autonomy and in team;
- candidates must possess appropriate English language skills to (at least) level B1.

In order to be admitted to the programme, candidates need to possess the above-mentioned competences and skills through the submission of a detailed curriculum vitae ac studiorum. These can also be evaluated by an admission interview, if needed, with the Admission Commission. Furthermore, candidates are required to submit a motivational letter in which they discuss their motivation to apply to one of the curricula. The candidates applying to the curriculum in Raw Materials Exploration and Sustainability will also be evaluated on the overall motivation, innovation and entrepreneurial potential related to the themes covered by the EIT KIC on Raw Materials.

Curricular requirements

A first cycle degree in one of the following classes:

- ex. Italian Ministerial Decree no. 270:
  L-34 in Scienze Geologiche, L-32 Classe delle Lauree in Scienze e Tecnologie per l'Ambiente e la Natura, L-7 Classe delle Lauree in Ingegneria Civile e Ambientale;
- ex. Italian Ministerial Decree no. 509/99:
  L-16 in Scienze della Terra, Classe 27 Scienze e Tecnologie per l'Ambiente e la Natura, Classe 8 Laurea in Ingegneria per l'Ambiente e il Territorio;
- Previous four-year degree programme system:
  Laurea in Scienze Geologiche, Laurea in Scienze Naturali;
- Previous five-year degree programme system:
  Laurea in Scienze Geologiche, Laurea in Ingegneria per l'Ambiente e il Territorio

- Qualification obtained abroad deemed equivalent to those listed above.

Evaluation of the personal preparation

In order to successfully attend the second cycle degree in Geology and Territory, the candidate needs to have basic knowledge of math, chemistry, physics and geology, with particular focus on:

- competences in chemistry, physics, math and informatics which represent a solid scientific cultural background and specifically the ability to describe and interpret geological processes;
- competences in Earth Sciences necessary to understand the theory and practical outcomes of the evolution of the planet;
- knowledge of methods and practices necessary for outdoor, laboratory and on the field training activities aimed at geological analysis;
- ability to work in autonomy and in team;
- candidates must possess appropriate English language skills to (at least) level B2.

In order to be admitted to the programme, candidates of the curricula A and B need to possess the above-mentioned competences and skills through the submission of a detailed curriculum vitae ac studiorum. These can also be evaluated by an admission interview, if needed, with the Admission Commission. Furthermore, candidates are required to submit a document in which they state to which curriculum they apply.

In order to be admitted to the programme, candidates of the curriculum C in Raw Materials Exploration and Sustainability need to demonstrate the required competences and skills through the submission of a detailed curriculum and an admission interview with the Admission Commission. Candidates will also be evaluated on the overall motivation, innovation and entrepreneurial potential related to the themes covered by the EIT KIC on Raw Materials.

Art. 2 Mobility rules between Degree Programme curricula. Individual study plans.

Students may choose from the courses available in the course structure diagram, following the methods indicated in the structure itself and in the terms indicated annually by the Department and published on the University website.

Individual study plans may be presented and transfer between the provided curricula is permitted in the terms laid down annually by the Department and published on the University website.
The Degree Programme Board assesses the study plans presented on the basis of their coherence with the Degree Programme Teaching regulations and the coherence with the learning outcomes of the degree programme. It also checks that the number of exams, course units and relative credits are no lower than the corresponding number laid down in the official Course Structure Diagram.

According to the same criteria, the Degree Programme Board also assesses the applications to transfer between curricula.

Art. 3 Implementation of learning activities and types of teaching activities

The enclosed teaching plan indicates all the learning activities and their division into hours of classroom teaching, practical exercises or internship, as well as the type of teaching methods.
Any further information will be published annually on the University website.

Art. 4 Attendance and preparatory activities

Attendance of the teaching activities is not compulsory, but strongly advised. Preparatory activities are indicated in the teaching plan.

Art. 5 Flexible study programme

The student can adopt a flexible study programme so to complete the study programme in more or less time envisioned by the degree programme (3 years for bachelor's degree ans 2 years for master's degrees) according to the Didactic Regulation of the University of Bologna.
Should teaching activities of the study programme be not active anymore, they can be substituted in order to guarantee the quality and sustainability of the didactic offer.

Art. 6 Assessment of learning activities

The attached teaching plan indicates all cases in which the learning activities end with an exam, marked with a score out of 30 or by simple "pass" in the case of having acquired the relative competencies.
The assessment methods (oral, written or practical exam or any combination thereof; individual or group exams) are laid down annually by the Degree Programme during the presentation of the teaching plan and notified to the students via the University website prior to start of the programme.

Art. 7 Elective learning activities

Students may select one or more learning activities autonomously from among those identified by the Degree Programme Board and listed in the enclosed Course Structure Diagram.

If students intend to sit exams concerning an activity that is not included among those identified by the Degree Programme Board, they should apply to the Degree Programme Board in the terms laid down annually and published on the University website. The Board will assess the coherence of the choice with the student's study programme.

Art. 8 Criteria for the recognition of credits acquired in degree programmes in the same class

The acquired university credits are recognised up to the number of credits indicated for the same subject area laid down in the degree programme teaching regulations, in compliance with the relative subject area and the type of learning activities.

If having recognised the credits according to the provisions of this regulation, there are unused residual credits, the Degree Programme Board may recognise them by assessing the specific case in coherence with the teaching and cultural affinities.

Referring to degree programmes delivered in a language other than Italian, recognition refers to course units delivered or learning activities undertaken in that language.

Art. 9 Criteria for the recognition of credits acquired within degree programmes in different classes, from telematic universities or international degree programmes

The acquired credits are recognised by the Degree Programme Board according to the following criteria:

- analysis of the course contents
- assessment of the coherence of the scientific-disciplinary fields and the contents of the learning activities in which the student has acquired the credits with the specific learning outcomes of the study programme and the individual learning activities to be recognised, in any case pursuing the aim of promoting student mobility.

The credits are recognised up to the maximum number of university credits provided for in the programme laid down in the degree programme teaching regulations, in compliance with the relative subject area and the type of learning activities.

If having recognised the credits according to the provisions of this regulation, there are unused residual credits, the Degree Programme Board may recognise them by assessing the specific case in coherence with the teaching and cultural affinities.

Art. 10 Criteria for the recognition of extra-university competencies and skills

Competencies acquired outside of the university may be recognised in the following cases:

- professional knowledge and skills certified under the terms of the applicable laws;
- competences and skills acquired in post-graduate learning activities run or planned by the University.

The request for recognition shall be assessed by the Degree Programme Board considering the indications of the academic bodies and the maximum number of recognisable credits laid down in the Degree Programme Teaching Regulations.
This recognition is subject to the activities being coherent with the specific learning outcomes of the degree programme and the learning activities which are recognised, also in consideration of the contents and duration in hours of the implemented activity.

Art. 11 Internships for the preparation of the final examination or linked to a project aiming to develop learning and academic skills

At the request of the student, the Degree Programme may, following the procedures laid down in the University Regulations concerning internships and international mobility programmes, and in compliance with EU laws, authorise an internship for the purposes of the **final examination or preparing the dissertation** or in any case linked to a project aiming to develop learning and academic skills.

These learning experiences shall not exceed 12 months and consist of at least 150 hours, shall be completed by the date of graduation; learning credits may be awarded:

- within the quota for the final examination;
- for the internship activities laid down in the course structure diagram;
- for elective activities counting towards the internship.

Art. 12 The mobility structure of the curriculum RaMES

The students enrolled in the curriculum in Raw Materials Exploration and Sustainability must complete a period of international mobility awarding at least 15 CFU/ECTS and a period of cross-organizational mobility of at least 15 CFU/ECTS.

Art. 13 Final examination methods

- **Characteristics of the final examination**

The final examination to graduate in the 2nd cycle degree programme consists in the production and public discussion of an original dissertation based on a topic that is consistent with the programme objectives, under the guidance of a supervising professor.
The dissertation must demonstrate the students' command of the subject, critical skills, ability to work autonomously and strong communication skills. The final examination may be linked to a project or internship activity.

The student, based on his/her enrollment in the curriculum, will be able to carry out one or more of the following activities related to the facts, concepts, principles and theories of Earth Sciences:

- Carry out stratigraphic analyses and geological surveys with the production of geological, geomorphological and thematic maps aimed at their use for the reconstruction of the geological and geomorphological history of the territory or their application for planning and design of interventions involving the subsoil and the supply of georesources;
- analyze and evaluate the activities of finding, evaluating and managing geological resources;
- conduct geognostic investigations and exploration of the subsoil, also with geophysical and geochemical methods, aimed at prospecting and managing geo-resources, defending the soil, carrying out civil engineering works and carrying out archaeological research;
- analyze environmental impact assessment projects;
- perform and certify, by interpreting the results for multiple purposes, the analysis of geological materials;
- enrich existing Earth Science knowledge by promoting and conducting scientific research.

The student of the curriculum RaMES is required to include in the final thesis a chapter dedicated to the themes of the EIT KIC Raw Materials and how these are related to the thesis project; the student is also expected to discuss the competences and skills acquired throughout the programme. During the development of the thesis, the student of the curriculum RaMES receives guidance from both an academic and a non-academic supervisor.

Art. 14 Correspondence between the credits assigned to each learning activity and the planned learning outcomes

On 16 December 2022, the Joint Teacher-Student Committee expressed its favourable opinion under the terms of article 12 para. 3 of Ministerial Decree no. 270/04.

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