GREAT MBA
Raw Materials

GLOBAL RAW MATERIALS
Management Education and Training

Course Unit Assessment Method

University: Nova FCT
Curricular Unit: The Role of Raw Materials in the Global Economy
Course unit 1.3.: Geopolitics, Risk & Leadership in Critical Raw Materials
Course unit Coordinator: Prof. Alexandre Velhinho
Date: 13 November - 21 November 2026



Supported by:
RawMaterials
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Who I am



Alexandre Velhinho
Assistant Professor
NOVA FCT
Materials Science Department

G — Geography
From Lisbon, working at NOVA FCT in Monte de Caparica, Portugal.

R — Role
I coordinate the Master on Advanced Materials and Innovative Recycling.
At the same time, I am a researcher on Hybrid Materials.
My scientific interests cover Heterogeneous Materials, Materials Processing and the role of Materials in Sustainability.

E — Expectation
I hope to contribute to a better understanding of the societal importance of Materials.

A — About you
I am a Technical Adviser of the International Mountaineering Federation (UIAA).
My background as a Mountaineer and Outdoor Leader provided me with a different perspective of Leadership and Risk Management issues.

T — Tell us…
I particularly enjoy the Outdoors. I've had the pleasure to travel to remote places in the Namib, the Alps, the Caucasus, the Rocky Mountains and the Himalaya.
I am particularly fond of maps…

Course Unit 1.3.
Geopolitics, Risk & Leadership in Critical Raw Materials

Assessment Method

NOVA SCHOOL OF SCIENCE & TECHNOLOGY

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Course Unit 1.3. Geopolitics, Risk & Leadership in Critical Raw Materials

This course is part of the curricular unit The **Role of Raw Materials in the Global Economy**, led by NOVA FCT, and has a workload of 20 hours, corresponding to 3 ECTS credits. The grade for this course unit, will contribute to the final programme grade, weighted according to its ECTS credits.

Course 1.3	Geopolitics, Risk & Leadership in Critical Raw Materials | Lead by NOVA FCT							
Session	Date	Content	Session Duration	Weekday	Format	Module Coordinator	Faculty Team	Time: CET
11	13/11/2026	Geopolitics of critical raw materials	5,0	Friday	online	Prof. Alexandre Velhinho (NOVA FCT)	Alexandre Velhinho António Grilo Vitor Correia Mafalda Soares	3:00 to 8:00 pm
12	14/11/2026	Scenario analysis and strategic foresight, Leadership and decision-making under uncertainty	5,0	Saturday	online		Alexandre Velhinho Braz Costa Rita Pelica	9:00 am to 2:00 pm
13	20/11/2026	Supply disruptions, trade conflicts, and systemic risk	5,0	Friday	online		Alexandre Velhinho Maria Cristina Vila André Carvalho	3:00 to 8:00 pm
14	21/11/2026	Global players: states, multinational firms, and strategic alliances	5,0	Saturday	online		Alexandre Velhinho Mafalda Soares Alvaro Antoni	9:00 am to 2:00 pm
	Total Workload:		20,0					

The Assessment for this course unit will be as follows:

- **Individual online multiple-choice test** = 30%
- **Written group Assignment** = 70%

Assessment Method

The final course unit grade comprises two components:

1. **Individual online multiple-choice test: 30%**

Test Rules:

- The individual online multiple-choice test, will be conducted on Moodle, and will be performed after the course session of **21 November 2026**. Within **60 minutes**, between 14:01 (CET) 21 November 2026 and 23:59 (CET) 22 November 2026, participants will have the opportunity to complete it anytime during the day through Moodle;
- Online test will account for 30% of the final course grade;
- It will assess participants' understanding of the key concepts and their ability to apply the knowledge acquired throughout the unit;
- The test must be completed individually, without assistance from other participants or third parties;
- Collaboration, sharing questions or answers, and the use of AI tools are not permitted;
- Participants must complete and submit the test within the allocated time;
- The Learning Experience Manager, Ana Dores, will be available to provide support if needed.

Assessment Method

The final course unit grade comprises two components:

2. Written group Assignment: 70%

Evaluation Criteria:

Participants will develop a written group assignment addressing a practical case or challenge relevant to the course unit. The assignment should demonstrate the application of course concepts, critical analysis and the development of well-supported recommendations. The assignment will be assessed against the following criteria:

- **Overall quality and academic rigor**: accuracy, relevance and depth of the work;
- **Application of knowledge:** effective integration of course concepts and frameworks into the analysis of the selected case or challenge;
- **Critical thinking**: ability to evaluate evidence, compare alternatives and discuss relevant challenges and trade-offs;
- **Use of evidence and sources**: relevance and credibility of supporting information, with appropriate referencing;
- **Structure and written communication:** clear organization, logical argumentation and professional presentation.

Assessment Method

The final course unit grade comprises two components:

2. **Written group Assignment: 70%**

Guidelines:

- **Length:** 5 pages of main content, excluding the cover page, references and any appendices;
- **Character count:** no separate character limit applies; the page limit is the guiding requirement;
- **Formatting:** Arial or Calibri, 11-point font, 1.15 line spacing and standard margins of approximately 2.5 cm;
- **Submission format:** a single PDF document per group, with numbered pages. Tables and figures may be included where they support the analysis and should be clearly labelled and referenced*: a guided exercise book is provided to each group, for all sessions, which will serve as the basis for developing the group assignment. Based on these exercises, students will be expected to prepare a portfolio/dossier for CU1.3.*

Assessment Method

The final course unit grade comprises two components:

2. Written group Assignment: 70%

Establishment of the Working Group:

- Participants are already organised into three groups;
- This approach aims to encourage the exchange of different perspectives, collaborative learning and the integration of complementary knowledge into the group assignment. As participants do not yet know one another, the groups have been formed by the programme coordination team to facilitate interaction and help everyone integrate into the cohort.

Group 1	Group 2	Group 3
Bogdan Giubega	Simona Fontul	João Lourenço
Cátia Dias	João Cruz	Maria Barbosa
Dorottya Nagy	Magda Biernat	Marnix Paul
João Fernandes	Pravin Ughade	Annamaria Grassi
Joana Frazão	--	--

Assessment Method

The final course unit grade comprises two components:

2. Written group Assignment: 70%

Project Topic Selection:

- The challenge for this assignment for all groups is the following:

  Act as the management team of a fictional company. Explain its value chain, analyse simple operating economics and risks, and recommend how to obtain additional capacity. Your final decision is: Own an additional capability, use a specialist partner, or defer the expansion.

  - Group 1 - Value Chain Strategy Report: Lithium-ion batteries
  - Group 2 - Value Chain Strategy Report: Rare earth permanent magnets
  - Group 3 - Value Chain Strategy Report: Semiconductors

Submission deadline:

2 December 2026, by 23:59 (CET time).
The group assignment will be assessed solely on the written submission and must be emailed to the **Course unit Coordinator:** Prof. Alexandre Velhinho and uploaded to Moodle platform. No oral presentation is required.

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Keep Learning. Keep in touch.

Prof. Alexandre Velhinho | ajv@fct.unl.pt

Ana Dores | a.dores@fct.unl.pt





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