



An International and Multidisciplinary Master 2 Arctic Studies at Versailles Saint-Quentin University (UVSQ) in France



**Alain Sarkissian (LATMOS), Jan Borm (CEARC)
and the teaching team**



**Eberhard Falck & Grégory Quenet (REEDS),
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Presentation

Arctic Studies at the UVSQ

2nd Year Master Programme — directed by
Jan Borm (CEARC) & Alain Sarkissian (LATMOS)

This five-year degree programme is original in covering all major domains of Arctic studies. The regions of the Arctic have been put somewhat on the margin of global history and economic development but, they are now witnessing rapid changes in economic activity and also in social and environmental dynamics. With these changes come new perspectives but also new stresses and challenges, such as the fragile balance between Arctic ecosystems, human societies and development activities. The ARCTS programme blends teaching, training and research with business, governance, societal life and intercultural mediation, aiming to contribute to a sustainable and acceptable development of the Arctic in a world characterised by complex geopolitical interaction.

The programme reflects three major objectives: the study of the essential domains in any decision-making process concerning the Arctic (environmental and natural science + technology, economics and governance, Arctic societies and culture); scientific and cultural competence combined for interventions as a facilitator in the fields of expertise and consulting (including modules of specialisation either in science & technology or social & human sciences); an international programme taught in English by specialists (academics, industrial and business executives, politicians) to students from the Arctic and elsewhere.



ARCTIC STUDIES: CORE COURSES

● **Environmental Science** — Valérie Masson (LSCE)

This unit presents fundamental aspects of environmental science in the Arctic, from atmospheric pollution and the ozone atmosphere to the climate. Three main themes will be looked at: pollution in the Arctic, Arctic climate, and the Arctic atmosphere.

● **Man and the Environment**

— Grégory Quenet (FREAA)

This course presents Arctic societies and the principal socio-economic issues of the Arctic today in the first part (Dr. Jean-Michel Huctin). The second part offers an introduction to the history of environmental awareness, the history of natural resources in the Arctic and the question of environmental responsibility.

● **Economics, Environment & Risk Management** — Eberhard Falck (REEDS)

This course offers an integrated view on risks to which Arctic societies may be exposed. After an introduction to environmental risk assessment and management, it examines the types of risks and hazards, as well as associated vulnerabilities of societies and how their resilience and resilience can be strengthened. The course also looks at issues of risk governance.



IN ADDITION TO THE CORE COURSES (AT LEFT), STUDENTS WILL CHOOSE ONE OF THE TWO SPECIALISATION OPTIONS (BELOW & RIGHT)

OPTION A: SCIENCE & TECHNOLOGY

● **Climate & Arctic Weather**

— Alain Sarkissian (LATMOS)

This unit examines three central themes: severe events in the Arctic, the consequences of climate change in the Arctic and the role of polar regions in comparative climatology. Group work exploits weather archive data and the UVSQ's own weather station.

● **Climate Change in the Arctic**

— Alain Sarkissian (LATMOS)

Some of the themes of unit 9 come under closer scrutiny in this module: severe events such as polar lows and wind blasts in relation to climate change. The group work will introduce students to the Arctic paleoclimate and offer them a more detailed understanding of the work furnished by UVSQ's weather station.

● **Geology** — Eberhard Falck (REEDS)

This module provides a concise overview of the geology of the Arctic and circumpolar regions and an outline of the occurrences and reserves of mineral resources (base and precious metals, coal, oil & gas, etc.) in the Arctic. This knowledge will help to identify possible areas of environmental stress and resource conflicts.

OPTION B: HUMAN & SOCIAL SCIENCES

● **Governance Issues** — Eberhard Falck

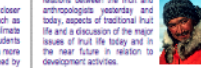
Science-based policy approaches are introduced with attention to the legal framework, driving forces of social, economic and environmental change, environmental services, and mixed anthropo-geopolitical stressors. Attention is given to decision support procedures for sustainability, where economic viability, social justice and cultural integrity are placed alongside impact assessment of ecosystem change and stability.

● **Arctic Anthropology** — Jean-Michel Huctin

This course offers detailed analyses of three central themes of Arctic anthropology: the relations between the fruit and anthropologists yesterday and today, aspects of traditional fruit life and a discussion of the major issues of fruit life today and in the near future in relation to development activities.

● **Arctic Travel Writing** — Jan Borm (CEARC)

The lecture course offers a survey of the history of Arctic exploration narratives, narrative ethnography and travel accounts from the 16th to the 21st century. Several contemporary texts will be analysed in more detail. The group work of module 13 is dedicated to the elaboration of a group project to be determined by the students.



Training programme in Methods of Observation: This module initiates students to methods of observation in geophysics, plantology and astronomy at the Observatory of Haute-Provence in southern France, with preparation of observations on the T20 telescope and observation with the 150 and 1150.

French and English language modules: French as a foreign language (beginners, intermediate and advanced levels, taught at the UVSQ's language centre) for non-transpolar students; and English for scientific purposes for the whole student group.

Cycle of Guest Lectures: The aim of this cycle consists in offering students lectures by invited guest speakers on subjects that complement the other units of the Arctic Studies programme. Lectures are scheduled in environment science, economics and governance issues including project evaluation based on multicriteria analysis and tourism studies as well as culture.

Report on Professional Training/Dissertation: Students enrol in a three-week professional training programme (at research institutes, administration, political and cultural institutions, companies, associations and non-governmental organizations) and write a report on their experience. A dissertation based on research of at least 50 pages can be added or partly replace the report.

At the Observatory of Upper-Provence, South of France, September 2010



Visit of Paris, November 2010



**Real time video conference from Belgium
Amphitheatre Gérard Mégie, in January 2010**
International experts in anthropology and politics



**Copenhagen University
February 2011**
International experts in geophysics



Programme 2011-2012

International Master with courses in English

Multidisciplinary core courses including:

- climate and environmental sciences
- economics and governance
- social and human sciences (circumpolar approach)

Two specializations in option: Science and Technology or Humanities

Admission: European Master 1 or equivalent (BA+1 or 4 years of higher education). Open to all students interested in Arctic issues and questions of sustainability

		ECTS	CM	TD
Core courses (60 ECTS for Science and Humanities)				
Semesters 1 and 2 (64 ECTS)				
MSAR01	Environmental Science	4	18h	
MSAR02	Man and the Environment	4	12h	
MSAR03	Risk Management	4	18h	
MSAR04	Arctic Societies	4	18h	
MSAR05	Modern Languages 1 and 2	6	48h	
MSAR06	Introduction to Methods of Observation	6	5h	24h
MSAR07	Guest Lecture Series	6	24h	
MSAR08	Internship and report and/or research dissertation + defence	6	12h	
MSAR09	Arctic Climate and Weather	4	12h	
MSAR10	Governance and Sustainable Development	4	12h	
MSAR11	Travel Itinerary	4	12h	
"SCIENCE" optional courses (total 8 ECTS)				
Semesters 1 and 2				
MSAR12	Physical Sciences of the Earth	6	6h	12h
"HUMANITIES" optional courses (total 6 ECTS)				
Semesters 1 and 2				
MSAR13	Optional courses on Arctic anthropology, economy, level 1/2/3/4	6	18h	

Year 2010-2011

- 20 students
- Countries: France, Russia, Armenia, Greenland
- 12 conferences from UK, Belgium, France, Greenland, Russia, Finland, Denmark, Germany...
- 16 teachers
- Visits to Paris, Versailles, Observatory of Upper-Provence, Copenhagen (Denmark), Tornio (Finland), Brest (in April 2011), etc.

Expected 2011-2012

- 25-30 students
- More Countries: Germany, Finland, Poland, Denmark...
- More Visits

Expected after 2012

- 25-30 students
- 2 years: M1 and M2
- More collaboration with Universities of Lapland, Yakoutsk, etc.