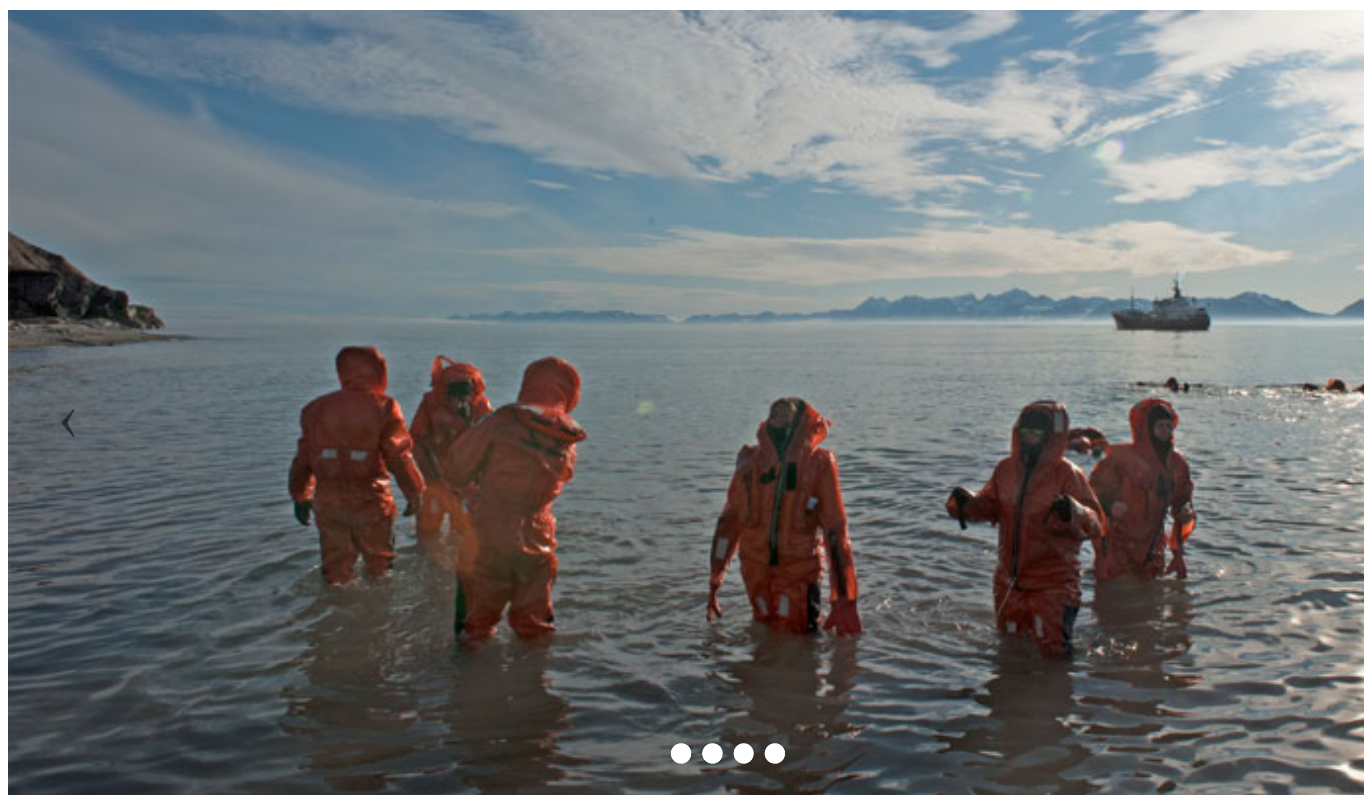


Arctic Geology

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Arctic Geology (AG)

The unique geology of Svalbard and its present-day cryosphere provide superb opportunities to study geoscience. The Geology courses at UNIS are therefore built to take full advantage of having a high Arctic field setting on our doorstep. Hands-on field activities are closely integrated with state-of-the-art classroom education and, during your stay, you will become part of a vibrant international geology and physical geography community of Arctic-focused research.

The geological evolution of Svalbard is recorded in spectacular geological sequences spanning the Precambrian to the Cenozoic, and overlain by Quaternary glacial and interglacial deposits. Easily accessible outcrops make it possible to demonstrate the interplay of continental drift with tectonic, glacial, periglacial, coastal, fluvial, and marine sedimentary processes.

There is, for instance, a long history of past climate variations in Svalbard's geological record. There are pre-Cambrian glacial tills that formed when Svalbard was located on the Southern Hemisphere, organic rich Mesozoic rocks which were deposited at equatorial latitudes, and Quaternary glacial and interglacial marine and terrestrial deposits from its recent situation. Large parts of the archipelago are currently covered by glaciers, and there is continuous permafrost within ice areas, and even below some of the glaciers. The close proximity of present-day geological, glacial, periglacial, marine, terrestrial processes provides an exciting field laboratory as the basis for study.

Recommended Bachelor course combinations

Autumn semester

AG-210 (<https://www.unis.no/course/ag-210-the-quaternary-and-glacial-geology-of-svalbard/>) and AG-211 (<https://www.unis.no/course/ag-211-arctic-marine-geology/>)

AG-204 (<https://www.unis.no/course/ag-204-the-physical-geography-of-svalbard/>) and AG-221 (Arctic Physical Geographical Field Techniques)

Recommended workload is 30 ECTS per semester.

Spring semester

AG-209 (<https://www.unis.no/course/ag-209-the-tectonic-and-sedimentary-history-of-svalbard/>) and AG-222 (<https://www.unis.no/course/ag-222-integrated-geological-methods-from-outcrop-to-geomodel/>)

Search in all courses (<https://www.unis.no/courses/>)

Bachelor Courses overview

Course Name

AG-204 The Physical Geography of Svalbard (15 ECTS) (<https://www.unis.no/course/ag-204-the-physical-geography-of-svalbard/>)

AG-209 The Tectonic and Sedimentary History of Svalbard (15 ECTS) (<https://www.unis.no/course/ag-209-the-tectonic-and-sedimentary-history-of-svalbard/>)

AG-210 The Quaternary and Glacial Geology of Svalbard (15 ECTS) (<https://www.unis.no/course/ag-210-the-quaternary-and-glacial-geology-of-svalbard/>)

AG-211 Arctic Marine Geology (15 ECTS) (<https://www.unis.no/course/ag-211-arctic-marine-geology/>)

AG-218 International Bachelor Permafrost Summer Field School (10 ECTS) (<https://www.unis.no/course/ag-218-international-bachelor-permafrost-summer-field-school/>)

Course Name

AG-220 Environmental Change in the High Arctic Landscape of Svalbard (10 ECTS) (<https://www.unis.no/course/ag-220-environmental-change-in-the-high-arctic-landscape-of-svalbard/>)

AG-222 Integrated Geological Methods: From Outcrop to Geomodel (15 ECTS) (<https://www.unis.no/course/ag-222-integrated-geological-methods-from-outcrop-to-geomodel/>)

Master Courses overview

Course Name

AG-322 Fold and Thrust Belts and Foreland Basin Systems (10 ECTS) (<https://www.unis.no/course/ag-322-fold-and-thrust-belts-and-foreland-basin-systems/>)

AG-323 Sequence Stratigraphy – a Tool for Basin Analysis (10 ECTS) (<https://www.unis.no/course/ag-323-sequence-stratigraphy-a-tool-for-basin-analysis/>)

AG-325 Glaciology (10 ECTS) (<https://www.unis.no/course/ag-325-glaciology/>)

AG-326 Quaternary Glacial and Climate History of the Arctic (10 ECTS) (<https://www.unis.no/course/ag-326-quaternary-glacial-and-climate-history-of-the-arctic/>)

AG-330 Permafrost and Periglacial Environments (10 ECTS) (<https://www.unis.no/course/ag-330-permafrost-and-periglacial-environments/>)

AG-334 Arctic Basins and Petroleum Provinces (10 ECTS) (<https://www.unis.no/course/ag-334-arctic-basins-and-petroleum-provinces/>)

AG-335 Arctic Seismic Exploration (10 ECTS) (<https://www.unis.no/course/ag-335-arctic-seismic-exploration/>)

AG-336 Rift Basin Reservoirs: From Outcrop to Model (10 ECTS) (<https://www.unis.no/course/ag-336-rift-basin-reservoirs-from-outcrop-to-model/>)

AG-338 Sedimentology Field Course – from Depositional Systems to Sedimentary Architecture (10 ECTS) (<https://www.unis.no/course/ag-338-sedimentology-field-course-from-depositional-systems-to-sedimentary-architecture/>)

AG-340 Arctic Glaciers and Melt Season Dynamics (10 ECTS) (<https://www.unis.no/course/ag-340-arctic-glaciers-and-melt-season-dynamics/>)

AG-342 The Marine Cryosphere and its Cenozoic History (10 ECTS) (<https://www.unis.no/course/ag-342-the-marine-cryosphere-and-its-cenozoic-history/>)

Course Name

AG-346 Snow and Avalanche Dynamics (10 ECTS) (<https://www.unis.no/course/ag-346-snow-and-avalanche-dynamics/>)

AG-348 Arctic Late Quaternary Glacial and Marine Environmental History (10 ECTS) (<https://www.unis.no/course/ag-348-arctic-late-quaternary-glacial-and-marine-environmental-history/>)

AG-349 Geological Constraints on CO2 Storage (5 ECTS) (<https://www.unis.no/course/ag-349-geological-constraints-on-co2-storage/>)

AG-350 Arctic Glaciers and Landscapes (10 ECTS) (<https://www.unis.no/course/ag-350-arctic-glaciers-landscapes-10-ects/>)

PhD Courses

Course Name

AG-822 Fold and Thrust Belts and Foreland Basin Systems (10 ECTS) (<https://www.unis.no/course/ag-822-fold-and-thrust-belts-and-foreland-basin-systems/>)

AG-823 Sequence Stratigraphy – a Tool for Basin Analysis (10 ECTS) (<https://www.unis.no/course/ag-823-sequence-stratigraphy-a-tool-for-basin-analysis/>)

AG-825 Glaciology (10 ECTS) (<https://www.unis.no/course/ag-825-glaciology/>)

AG-826 Quaternary Glacial and Climate History of the Arctic (10 ECTS) (<https://www.unis.no/course/ag-826-quaternary-glacial-and-climate-history-of-the-arctic/>)

AG-830 Permafrost and Periglacial Environments (10 ECTS) (<https://www.unis.no/course/ag-830-permafrost-and-periglacial-environments/>)

AG-834 Arctic Basins and Petroleum Provinces (10 ECTS) (<https://www.unis.no/course/ag-834-arctic-basins-and-petroleum-provinces/>)

AG-835 Arctic Seismic Exploration (10 ECTS) (<https://www.unis.no/course/ag-835-arctic-seismic-exploration/>)

AG-836 Rift Basin Reservoirs: From Outcrop to Model (10 ECTS) (<https://www.unis.no/course/ag-836-rift-basin-reservoirs-from-outcrop-to-model/>)

AG-838 Sedimentology Field Course – from Depositional Systems to Sedimentary Architecture (10 ECTS) (<https://www.unis.no/course/ag-838-sedimentology-field-course-from-depositional-systems-to-sedimentary-architecture/>)

Course Name

AG-842 The Marine Cryosphere and its Cenozoic History (10 ECTS) (<https://www.unis.no/course/ag-842-the-marine-cryosphere-and-its-cenozoic-history/>)

AG-848 Arctic Late Quaternary Glacial and Marine Environmental History (10 ECTS) (<https://www.unis.no/course/ag-848-arctic-late-quaternary-glacial-and-marine-environmental-history/>)

AG-849 Geological Constraints on CO2 Storage (5 ECTS) (<https://www.unis.no/course/ag-849-geological-constraints-on-co2-storage/>)

AG-850 Arctic Glaciers and Landscapes (10 ECTS) (<https://www.unis.no/course/ag-850-arctic-glaciers-landscapes-10-ects/>)

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