UNIVERSITY OF OSLO

DIPLOMA

The Faculty of Mathematics and Natural Sciences

Zhihao Liu

born 26 March 1993

has 9 June 2023 been awarded the degree

Master of Science in Geosciences

Programme of study: Geosciences
Programme option: Geomorphology and Geomatics

Oslo, 28 August 2023

General information about the degree

Master of Science in Geosciences is awarded in accordance with the Regulations on Degrees and Titles Protected by Law of 16 December 2005 (No. 1574).

The length of study for the degree is 2 years and it comprises 120 ECTS credits. One year of study comprises 60 ECTS credits.

Master of Science in Geosciences is a qualification that is part of second cycle/level 7 in the Norwegian Qualifications Framework for Lifelong Learning, approved by the Ministry of Education and Research on 15.12.2011.

Information about the programme

The Master’s program in Geoscience provides a comprehensive training in geography, geology and geophysics. The chosen programme option gives an academic specialization, and the interaction between people and nature is a central theme in several of the programme options. Field and laboratory work, and computer modeling are integrated in most of the options.

The Master's degree programme is a two year programme of 120 ECTS and builds on the academic content of the Bachelor's degree (or equivalent). The programme consists of a theoretical, taught part of 60 or 90 ECTS and a Master's thesis of 60 or 30 ECTS. The theoretical part of the programme give the student the required academic depth, and the course content of the programme is decided in collaboration with the thesis supervisor before it is approved.

In the Master's programme in Geoscience, the candidate uses his / her knowledge from the bachelor programme to conduct a time-limited research and development project under supervision. Through the master's programme, the candidate will acquire sufficient scientific and technical competence to understand problems and see possible solutions. The Master's degree programme will give the candidate experience in working independently while being part of a research group. The work will give the candidate training in organizing and planning so that the project is carried out in line with the allocated resources and within the deadlines. The programme will provide the candidate with training in analyzing, assessing and conveying information, theories, ideas, issues and solutions in their own subject area, both in writing and orally.

Transcript of Records

University of Oslo

Name: **Liu, Zhihao**
Degree: Master of Science in Geosciences
Study programme: Geosciences
Programme option: Geomorphology and Geomatics

Date of birth: 1993-03-26
Received: 2023-06-09

Course		Semester	Credits	Grade	Grade distribution [1] A B C D E
Courses in the master's degree programme					
GEO4515	Remote Sensing	2021 autumn	10	B	
GEO4520	Advanced Remote Sensing and Topographic Analysis	2021 autumn	10	A	
GEO4171	Floods, Avalanches and Landslides	2022 spring	10	B	
GEO4460	Surveying, Photogrammetry and Spatial Analysis	2022 spring	10	A	
GEO4300	Geophysical Data Science	2022 autumn	10	A	
GEO4410	Glacial and Periglacial Geomorphology	2022 autumn	10	B	
Master's thesis					
GEO5960	Geosciences. Master Thesis *Snow Depth Retrieval and Downscaling using Satellite Laser Altimetry, Machine Learning, and Climate Reanalysis: A Case Study in Mainland Norway*	2023 spring	60	A	

Total: 120.0

1) For an explanation of the grade distribution, see the last page.

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Credit system and grading

The academic year normally runs from mid-August to mid-June and lasts for 10 months. Courses are measured in “studiepoeng”, considered equivalent to the European Credit Transfer System standard (ECTS credits). The full-time workload for one academic year is 1500 - 1800 hours of study / 60 "studiepoeng".

The Norwegian grading system consists of two grading scales: one scale with the grades pass or fail and one graded scale from A to E for pass and F for fail. The graded scale has the following qualitative descriptions:

A	Excellent	An excellent performance, clearly outstanding. The candidate demonstrates excellent judgement and a very high degree of independent thinking.
B	Very good	A very good performance. The candidate demonstrates sound judgement and a high degree of independent thinking.
C	Good	A good performance in most areas. The candidate demonstrates a reasonable degree of judgement and independent thinking in the most important areas.
D	Satisfactory	A satisfactory performance, but with significant shortcomings. The candidate demonstrates a limited degree of judgement and independent thinking.
E	Sufficient	A performance that meets the minimum criteria, but no more. The candidate demonstrates a very limited degree of judgement and independent thinking.
F	Fail	A performance that does not meet the minimum academic criteria. The candidate demonstrates an absence of both judgement and independent thinking.

The assessment is criterion referenced.

Grade distribution

The distribution of grades is shown by the percentage for courses using the graded scale A – F. Fail (F) is not included in the distribution. All results from the last five years are included in the calculation. The distribution is also shown for courses that have been active for less than five years. There has to be at least 10 approved results during the period.