

A new marine geoscience education at Stockholm University

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In-depth knowledge about the seas and oceans is essential for sustainable use of marine resources, and the demand for such expertise is increasing on all scales from local to global. The marine industry sector is growing worldwide, and the need for sea floor mapping and environmental assessments is increasing, especially in connection with marine installations such as offshore wind farms. To meet these demands, we have designed a new candidate program in Marine Geoscience, which started in the autumn 2023 at the Department of Geological Sciences at Stockholm University (Gyllencreutz et al., 2023). The program is intended to meet the increasing knowledge needs in society about our seas and oceans, which in many ways are related to climate change and sustainability.

The first year of the program includes a comprehensive basic course in earth systems science, followed by courses in mathematics, chemistry and physics to give a broad scientific understanding and a solid foundation for later, more specialized courses. The continued program gives a broad theoretical understanding of marine waters, sea floors, and sediments, together with practical skills in geophysical mapping methods, sea floor sampling, laboratory techniques and report writing. Many courses include fieldwork onshore as well as offshore, and we utilise the state-of-the-art vessels and geophysical equipment at the Askö laboratory, Stockholm University Baltic Sea Centre's field station, for marine fieldwork and excursions. In addition, Stockholm University holds a large repository of sediment cores and other sea floor samples from the Baltic Sea as well as from remote areas such as the Arctic Ocean, which give the students unique possibilities for hands-on studying of various marine geological sedimentary environments. The competences in equipment proficiency and analytical thinking acquired through this program are well suited for a career in the industry as well as in academia.

Although we offer a well-profiled education that meets a high demand on the job market, the number of applicants to the program is low. One reason to this is that geoscience in general is quite unknown to most students in Sweden, and marine geoscience even more so. This is partly explained by the fact that geoscience is excluded from the curriculum in the Swedish upper secondary school programs in natural sciences and engineering.

References

Gyllencreutz, R., Jakobsson, M., and Däcker, E., 2023: Bachelor's Programme in Marine Geoscience, Department of Geological Sciences at Stockholm University (webpage). <https://www.su.se/english/search-courses-and-programmes/mggek-1.597257>. Accessed 2023-10-15.