

Guidelines for the ‘Geoscientific Project’

as part of the master programs ‘Applied Geosciences’ and ‘Marine Geosciences’

Faculty of Geosciences, University of Bremen

Last revision September, 2025

These guidelines are intended to support students, tutors and project partners in planning and implementing of the ‘Geoscientific Project’ as part of the MSc programs in ‘Applied Geosciences’ (05-MAG-GP1) and ‘Marine Geosciences’ (05-MMG-GP1). The project is scheduled for the 3rd semester.

Aims of the ‘Geoscientific Project’

The Geoscientific Project is set out to develop and train practical skills of both professional and general character, which are not part of the curriculum in its current form. It enables the students to realize own conceptions, to acquire additional fields of competence and to establish contacts, which may improve their chances on the job market. The project fosters personal initiative and ‘learning by doing’, but equally represents a supervised, output-oriented practical project, which is to be documented by a written report and explained by a colloquium talk.

The responsibility to initiate one’s project, including the selection of the topic, is entirely on the side of the students. This also includes contacting a suitable **tutor** from the Department of Geosciences at the University of Bremen before the start of the project, who will review the final report. At the same time, suitable **project partners or project advisors**, e.g. from host institutions or companies, could be contacted and involved in the project. In addition, students (as well as all project participants) can contact the **module coordinator**, Prof. Dr. Katrin Huhn-Frehers (khuhn@marum.de), at any time to discuss their ideas or, later on, the implementation of their project; she is the contact person throughout the entire process.

The project may be devised and realized in (A) a fully self-contained approach or (B) can be integrated as contribution to an ongoing research or commercial project. Both individual and team projects are possible; in case of field projects, the latter often have logistic and operational advantages. For team projects, a well-defined task-sharing should be established from the beginning. Contribution and performance of every team partner must be demonstrated and evaluated separately at the end.

The ‘Geoscientific Project’ should not be equated with a master thesis, which is usually the mostly lab-oriented and analytical, nor should it be an extended BSc thesis or even a second MSc thesis. Instead, try to think and act as an entrepreneur and let yourself guide by your acquired geoscientific knowledge and interest. The focus is not on the scientific progress, but on a conclusive idea, practical value, wise and clever planning, a meaningful and interesting documentation of results and - last but not least - the broadening of the own horizon.

Scope of project types

When choosing a project topic, the scope of possible orientations is very broad. Every proposed project idea is individually examined and discussed. To this end, an informal meeting will be held with the student, tutor, and the module coordinator, Katrin Huhn-Frehers, no later than two weeks after the project registration. Here, the stated objectives, scope of the project as well as schedule are discussed to ensure that the project is appropriate and feasible.

An overview of completed 'Geoscientific Projects' can be found on the webpages of the Department of Geosciences at the Uni Bremen. The range of topics includes:

- a "field or mapping project" at land or sea without major laboratory components using field methods of geology, geophysics or mineralogy, also as contribution to a commercial or research project
- a "media project" like an extensive popular science article, an internet production, a video movie, a radio emission, an exhibit or a scholar teaching unit on a geoscientific topic
- a "technical project" for development, improvement and testing of practical geoscientific gear or instrumentation
- an "external project" at a company, organization or authority, which is geoscientifically demanding and has presentable aims, operations and results
- an "international project" comprising geoscientific activities abroad and cooperations with foreign partners

Support

The department's research groups grant technical support to the projects within the limits of availability and feasibility. Travel costs are generally at the expense of the students unless they can be covered by available research funds or by the cooperation partners. Because of high costs, ship time can only be granted in conjunction with scientific or commercial operations; this requires early arrangements some 4-8 months in advance. For all other project types, we recommend to get in contact with tutors and project partners as well as the module coordinator during the 2nd semester.

External projects at companies, authorities or organizations can be arranged as advanced professional practical training. Before signing a contract, students must ensure that they will have insight into the entire project chain and that they may freely report on their own obtained results.

Supervision, application and schedule

The module coordinator, Katrin Huhn-Frehers, offers an information meeting at least once at the beginning of each semester to advise participants about the schedule, topics etc. Dates will be announced on StudIP. In addition, KHF is available at any time to all kinds of questions throughout the entire process.

Please register on StudIP as early as possible each semester to receive all the information!

Supervision: The supervision, acceptance and evaluation of each project are at the responsibility of a thematically competent lecturer of the department of Geosciences at the University of Bremen, who will act as the tutor and will evaluate the final project report. For large or interdisciplinary projects, further advisors may be called in. Additional project partners or project or project advisors may be involved in external projects.

Registration: A project is registered by submitting the registration form (download from website) to the module coordination office (Petra Renken, prenken@marum.de) as soon as a topic and tutor have been identified and agreement on the proceedings has been reached. Theme, location and schedule of the project are specified and acknowledged by the tutor. The tutor has to sign the registration form. The module coordinator (Prof. Dr. Katrin Huhn-Frehers) acknowledges all submitted project concepts and forwards the registration to the Examination Office of the Department of Geosciences and PABO respectively.

Duration: A 'Geoscientific Project' should not exceed or fall below 10-12 weeks (400-450 hours / 15 CP) for reasons of comparability and recognition. The practical part of the project can be realized in one stretch or in stages before or during the 3rd semester.

The project period typically commences with a 1-2 weeks' phase of planning, preparation and literature research, followed by 4-5 weeks of field or practical project work (shipboard work mostly limited to 2-4 weeks) and 4-5 weeks of data processing and documentation in a written project report. The project is finalized by an oral presentation in one of the quarterly report colloquia in the presence of all fellow students and some project tutors and evaluated by a jury.

Schedule: Projects can be started at any time. There is no fixed registration deadline. The following fixed elements must be completed:

- (1) Project registration by submitting the registration form signed by the student and the tutor to module coordination office (Petra Renken, prenken@marum.de).
- (2) A project planning meeting has to be organized no later than two weeks after registration by the student. The student, the individual tutor from the Department of Geosciences, the module coordinator, Katrin Huhn-Frehers, and, if applicable the external project partners, will attend this meeting. The meeting can be held online. Aim of the meeting is (i) a short project outline, (ii) to discuss project schedule, and (iii) to discuss technical support (incl. funding). Students prepare brief minutes on these topics and submit to Katrin Huhn-Frehers (khuhn@marum.de) within two weeks at the latest.
- (3) At the end of the project, students present their project, main outcomes etc. in a geoscientific project colloquium. Colloquia are scheduled repeatedly in every semester, typically in December, in March, in June, and in September. Up-to-date information on dates and registrations for project presentation are exchanged via StudIP. An early personal registration in this platform is obligatory and should persist there until full completion of the project. The participation in audience of all colloquia of the own study cohort is expected.
- (4) Submission of the final report to the tutor. The tutor will forward the grade to the module coordinator.

Evaluation

The project grade is composed in equal shares by the tutor's grade for the report and the averaged grades of a jury (consisting of all tutors present at the colloquium) for the presentation. The project concept, realization and analysis will be evaluated as well as the quality of the written text, graphics and presentation. The grade is forwarded to PABO by the module coordinator.

Project report

Aims, proceedings and results of each project are documented in a project report, which must be submitted to the tutor if possible before the colloquium presentation. The character and suitable length of the report depends on the project type and should be negotiated with the tutor in case of doubt. The report should give a clear and compact account of realization steps and their results. It should basically encompass the following elements:

1. Title: Project denomination, author, period, tutor (1 page)
2. Table of contents (1 page)
3. Project character, theme, aims, integration (ca. 1-2 pages)
4. Results of the literature research (ca. 1-2 pages)
5. Instruments and methods, organization (ca. 2-3 pages)
6. Chronological project narrative (ca. 2 pages)
7. Results (ca. 8-10 pages, short explanations based on maps and graphics)
8. Summary and outlook (ca. 1 page)
9. Critical self-evaluation of the project (ca. 1-2 pages)
10. References (ca. 1-2 pages)
11. Appendix (original documents, tables, figures, media etc.)

The report or individual contribution to a team report should not greatly exceed 20 pages (DIN A4, 11pt or 12 pt font, 1.5 spaced, not counting the appendix).

Final presentation

Within one of the geoscientific report colloquia, which are obligatory for all participants, the project and the related findings and experiences are presented in an intelligible and appealing form. A timeframe of 20 minutes is available for each talk with discussion.