

3-årig emneevaluering

Emne:
GEOF232

Semester og år for gjennomført emneevaluering:
Spring 2024

Navn på emneansvarlig(e):
Hans Christian Steen-Larsen, Gillian Mary Damerell (only in 2024).
No student evaluation is available from 2024.

Innhold

The course introduces students to measuring atmospheric and oceanic properties like winds, currents, temperatures, and salinity. It aims to familiarize them with standard instruments, error sources, data handling, and quality control. Students work in small groups, focusing on specific instruments or data, and gather data during a common observation period. This data can come from field deployments, cruises, existing networks, or remote-sensing instruments. In a final meeting, groups present their work and discuss the interconnected processes in the ocean-atmosphere system.

By the end of the course, students will understand the principles of standard atmospheric and oceanographic instruments, the importance of representative measurement locations, and the main error sources. They will be able to evaluate weather station sites, work with their own measurement data, display data for scientific interpretation, and document procedures and results. Additionally, they will develop hypotheses and measurement strategies for fieldwork, work individually and in groups on self-defined problems, and present and discuss their results in writing and orally.

1. **Beskriv og begrunn pedagogiske valg i emnet, reflekter over studentens læring som følge av disse valgene.**

The course allows students to engage with complex, open-ended problems, offering a glimpse into the execution of a more extensive master's project. Students have more autonomy in selecting and completing their project tasks. They must also collaborate to identify the necessary data for each participant and devise the best logistical solutions, similar to the organization of advanced research expeditions. This approach provides students with a genuine understanding of practical and field-based meteorology and oceanography, potentially enhancing their motivation.

1. **Hands-on Approach:** The course is very hands-on, involving students in fieldwork, data collection, and organizing their projects. This approach not only helps students gain practical experience but also teaches them to plan and manage their time effectively. Students are involved in planning who will do what and when, and they also need to think about what is realistic to do with the equipment and time available.
2. **Project Ideas and Reports:** Providing students with lists of project ideas and reports from previous years helps those who struggle to come up with research ideas. This gives them a realistic experience of the challenges involved in developing a research project.
3. **Academic Writing:** The course emphasizes the importance of academic writing. Many students initially struggle with organizing their text, writing concisely and precisely, and referencing.

4. **Out-of-Class Activities:** The course encourages students to engage in out-of-class activities, such as background reading and developing project ideas. However, it is noted that students often do not start these activities until classes focused on project development begin. Providing more direction for these activities at the start of the semester could be beneficial.
5. **Programming Training:** The course includes programming training, which is essential for data analysis. There is often a gap between the strongest and weakest students in terms of programming skills. Most students, however, learn and develop their programming abilities during the course.

It is also suggested that more discussion in class on how to move from a vague project idea to a proper research question/testable hypothesis would be beneficial.

To address this, the course should include classes on academic writing and referencing. There is already a focus on writing good captions for figures and tables, but this should be a more integrated component of the course.

It is also noted that the python training was front-loaded too much last year, and it might be better to align it more closely with when students start using python in their projects.

Emneevalueringer skal også minst omfatte:

2. Oppfølging av tidligere evalueringer

Having taught the course for only one semester and being unaware of previous evaluations, we were unable to address past feedback. However, after reviewing prior evaluations and gathering student feedback since 2022, it is clear that communication remains a critical area for improvement.

We believe that one reason for the critical feedback on communication is that this course is the first time students encounter a high level of self-organization and motivation requirements. Therefore, aligning expectations must be a key focus of the course.

Additionally, we think that providing more suggested research questions could help students who are not yet comfortable with self-organization at this stage of their university education. This approach may assist them in navigating the course more effectively.

3. Studentevaluering og andre evalueringer som er relevante for emnet

Positive Aspects:

- Students appreciated the practical work, including the student cruise and field trips, which provided hands-on experience.
- The course effectively integrated theory from previous courses with practical applications, enhancing overall understanding.
- Teaching assistants were helpful, especially with programming and addressing questions.
- The course developed problem-solving skills, analytical abilities, and teamwork.

Areas for Improvement:

- Communication with instructors was a common issue mentioned in feedback from previous years. Students felt that responses to emails were slow, and important information about assignments and deadlines was often provided too late.
- Some students suggested that guest lectures could be more relevant and better timed.

- There was a need for clearer instructions and more structured planning for assignments and project tasks.

Suggestions for Additions:

- Students recommended more structured communication and planning, including a clear schedule for assignments and deadlines.
- Some students felt that there should be more coordination among instructors to ensure consistent communication.

4. Erfaringer fra andre som bidrar i undervisningen på emnet, både studenter og ansatte

The course is highly valuable in the bachelor's program as it introduces students to field work, data collection, and research projects for the first time, although it can be challenging due to its unique nature. Clear communication of expectations is crucial and has been well-handled by the course leaders. Many students struggle to create their own research projects due to inexperience with field work and limitations in resources, suggesting the need for example projects that can be customized. There is a significant disparity in programming skills among students, with some excelling and others struggling, raising questions about the appropriate level of programming expected from third-year students and whether more coding should be integrated into earlier courses. The shift from the research vessel Kristine Bonnevie to Hans Brattstrom has reduced ship time and the immersive field work experience, prompting a suggestion to use the Espegrend research station for a more cohesive field work environment.

5. Strykprosenten på emnet

Pass/Fail evaluation – 0% has failed since 2016.

6. Rapport i Tableau: https://rapport-dv.uhad.no/#/views/SVP3Emnegjennomfring_1/Emnegjennomfringslister?:iid=2

Emnegjennomføring oversikt pr år

ARSTALL	Antall kandidater	Antall kandidater be..	Bestått kandidater	Antall kandidater st..	Strykprosent kandidater	Snittkarakter
2016	6.00	6.00	6.00	0.00	0.0%	
2017	11.00	11.00	11.00	0.00	0.0%	
2018	6.00	6.00	6.00	0.00	0.0%	
2019	7.00	7.00	7.00	0.00	0.0%	
2020	10.00	10.00	10.00	0.00	0.0%	
2021	11.00	11.00	11.00	0.00	0.0%	
2022	10.00	10.00	10.00	0.00	0.0%	
2023	19.00	19.00	19.00	0.00	0.0%	
2024	8.00	8.00	8.00	0.00	0.0%	

7. Eventuell fagfelleevaluering

N/A

Vurdering av samsvar mellom emnets læringsutbyttebeskrivelse og undervisnings-, lærings- og vurderingsformer

The learning outcome description has been continuously revised and adjusted to better clarify the content, teaching methods, and expectations for passing the course. We now find a strong alignment between the course's learning outcome description and the methods of teaching, learning, and assessment.

However, there are several points that we think could be improved upon:

There should be a stronger integration of the meteorology and oceanography projects, partly due to logistical challenges related to being spread over a large geographical area. Additionally, it would be advantageous to demonstrate the connections between oceanographic and meteorological processes.

Furthermore, integrating all elements, such as course material, students, equipment, and research questions, could be significantly enhanced by adopting a more holistic approach to the topics the students concentrate on. This can be achieved by establishing an overarching theme that will serve as the foundation for their projects.

8. Vurdering av om framdrift og opplegg for emnet er i samsvar med de fastsatte målene for emne og program

The course is positioned in the 6th semester, aligning well with the later stages of the bachelor's program, much like a bachelor's thesis. This timing is ideal within the study path, as it integrates crucial generic skills such as programming, writing, presenting, group work, and planning.

9. I de tilfellene det er tilknyttet praksis eller arbeidsrelevans i emnet, skal det evalueres om ordningen fungerer tilfredsstillende.

N/A