3-årig emneevaluering: GEOV231

Emne: Marine Geology Field and Lab course

Semester og år for gjennomført emneevaluering: V22

Navn på emneansvarlig(e): Ulysses Ninnemann (2022), Haflidi Haflidason (2021, 2020, etc.....)

Innhold:

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

   Aims: The field and lab course has evolved to be run as a student driven research expedition. In addition to acquiring basic skills and knowledge of how to identify, classify, and interpret marine depositional environments by familiarization and application of a range of field and lab methods, the higher order learning outcome are familiarity with, and application of, the scientific method (formation of hypotheses/questions, experimental design and execution, analysis, interpretation, critical discussion and conclusion and presentation of findings). This emulates, and provides a scaffolding toward, their Masters thesis—where they will have to apply these approaches on a larger scale.

   Approaches: After a series of short lectures to introduce the students to the study region and relevant geologic processes, we follow these with labs and a range of learning activities to build basic skills and familiarity with the methods and processes they will encounter. For the research component, the students form teams and (under faculty supervision) design specific research aims for the field component and follow up lab work, and then we co-design the research cruise to achieve these collected objectives. The course is meant to build competency in a broad range of marine geologic skills, but also the more generic skills of safely designing and carrying out field work (HMS), understanding and applying the scientific method (formulating research questions based on SOA understanding and designing experiments to test/answer the questions). This was the first year I ran this course and in previous years student groups were given specific tasks and all did a similar project report but in a different study location. This year, we all worked together on a common field area but with complementary scientific aims--with the goal to emulate the way collaborative research cruises (science) are carried out in practice, and to foster teamwork and collaborative skills (relevant to private and academic sectors).
   There are strengths to both approaches (identical reports vs. coordinated synergistic scientific aims), the latter requires more advanced and mature students, and we will likely do a mix in the future depending on the participants backgrounds and abilities. Overall the course builds on a strong foundation as Haflidi Haflidason has continuously developed this course over a long period to optimize its learning outcomes. The effort now is to add more upper level (taxonomy) learning outcomes and model the scientific method in preparation for their Masters projects.

2. **Oppfølging av tidligere evalueringer**

3. **Studentevaluering og andre evalueringer som er relevante for emnet**

   a. **Typical comments in evaluation are: "*I tillegg gir emnet generell god øvig i å jobbe i grupper og selvstendig"; " Best course i ever had"***
   b. **In particular the students tend to point out the unique value of the cruise and lab work that there is no other way to learn than to carry it out.**
   c. **The students score the course very high, and value all of its learning activities**

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

a. **Verbally a number of students commented in the end during a course reflection session on how they value not only the experience with the field and lab techniques but in particular they felt that they now approach their own masters with more confidence having carried out and discussed and reported on an "independent" scientific project—thus increasing self-efficacy which is one of the most important factors correlated with pedagogic success.**

5. **Strykprosenten på emnet**
   0%

6. **Eventuell fagfellevurdering**
   a. **We did a running reflection (after every activity and summary at the end) amongst the co-teachers V22 since we were all replacing the sabbatical lecturer and assessed which specific activities functioned and how well the overall structure and content (in terms of material and activities) achieved their aims. The inclusion of students with very different backgrounds and at different study levels (exchange BSc students with local MSc students) poses a challenge. The more junior students need basic background that would be largely repetition for MSc students, and the junior students struggle to see the big picture and place their results in the larger context. In addition, we did not give the students sufficient introduction to seismic methods, something previous years were better at.**

7. **Vurdering av samsvar mellom emnets læringsutbyttebeskrivelse og undervisnings-, lærings- og vurderingsformer**
   a. **The course is well aligned. The teachers give regular feedback to the students/groups on their skill progress through the semester. Also encourage the students to use the tasks and the data in a multidisciplinary and a broad perspective.**

8. **Vurdering av om framdrift og opplegg for emnet er i samsvar med de fastsatte målene for emne og program.**
   a. **The course is irreplacable, and represents a keystone for the marine geology line at GEO. The lower order taxonomic learning outcomes are not acquired in any other course and the higher order ones (design and execution of scientific project) provide a valuable scaffolding toward the masters.**

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