

Evaluation of BIO316 – fall 2016

Overview of course

Course organizers: Anders Goksøyr (professor) and Marta Eide (post doc)

Module 1: Lectures & seminars

1. Course introduction & plan, general concepts of environmental toxicology (Anders Goksøyr)
2. Exploring target systems and mechanisms of action, lecture (Marta Eide)
3. Ecotoxicology of nanoparticles (Boris Jovanovic)
4. Microplastics in the environment (Marte Haave)
5. Contaminants in the food chain and possible human health effects, lecture (Jerome Ruzzin)

Module 2: Journal clubs

Journal club 1 (Book chapters, 3 groups, 2 students per group)

Journal club 2 (Scientific articles, individual presentations)

Module 3: Conference

[6th Norwegian Environmental Toxicology Symposium](#) (October 25-27, Oslo)

Assessment

The course is assessed on a pass/fail basis, based on attendance, contributions during seminars, and presentations. In the last journal club, we introduced peer review by the students for the first time in this course. The feedback from the students to each other was very constructive and to the point. They all saw the same positive sides and weaknesses as we as course organizers saw (and we never commented until the students had finished). From the evaluation, it seems like the students also were enthusiastic about this type of assessment.

Summary of student reports

Six students participated in the BIO316 course this fall. Of them, one was a PhD student, and the rest Master students. The majority therefore chose the course as it was required for their Master program, but also out of recommendation and interest.

The course is organized in a bit unconventional way, using lectures/seminars with invited researchers, journal clubs with presentations, and a visit to a national conference. Apparently, the students find this arrangement and variation attractive.

All of the lectures were well liked by the students, and they comment that they appreciate the “specialists” coming to teach and discuss their topics. Particularly, the lecture by Marte Haave was highlighted. For this lecture, the students were expected to prepare by reading different articles, and consider a set of points for discussion. Marte also brought samples of microplastics, and invited the student to study samples in the microscope. Thus, this lecture

probably required the most from the students, both by preparations and during the lecture/activity.

The course had two journal clubs: In the first, students studied and presented a chapter from the textbook; in the second, students were randomly assigned different research articles and reviews, selected by the course leaders. The evaluation show that the students appreciated the chance to go deeper into a subject and practice their presentation skills. However, some found the articles a bit too advanced. To choose articles at an appropriate level is a challenge also for the course organizers, but the list should be further refined for the next year.

In the last module of the course, the students were attending the NETS conference in Oslo, including a pre-symposium, two days of presentations, and banquet dinner. This is a very different setting from the normal student days and a lot of new information, as also reflected upon in the students' evaluation. However, they also express that it is an interesting opportunity to experience research from around the country. Perhaps the course organizers should consider ways to better prepare the students for such conferences: Hand out abstracts in advance, select/highlight specific lectures that are of particular interest, include some of the presentations/lecturers in the journal clubs?

The learning outcome are rated by the students as quite good. Perhaps lowering the levels of journal club articles and better preparing for the conference can be helpful in increasing the learning experience?

The students feel that the course corresponds well with the credits, which is important. However, there might be some room to expect more preparations in advance of the lectures. Finally, all students would recommend the course to their fellow students. This encourages us to continue with today's organization and main set-up of the course in future semesters.

Summary of student's evaluation forms

(Available responses not used are shown in parentheses)

At what level are you in your education? *

5 Master student
1 PhD student

Have you taken BIO216 - Toxicology at UiB? *

4 Yes
2 No
(Other)

Why did you choose this course? (Multiple choices can be selected) *

4 It is required for my Master education

1 It was recommended by fellow students
 1 I find toxicology very interesting
 (It was recommended by the student administration)

How did you like the set-up/organization of the course? (with varying lectures, student projects and presentations, and the NETS conference) *

6 Interesting, varying
 (Okay
 Messy, unorganized)

Please rate the following activities *

	1 (poor)	2	3	4	5 (excellent)	Did not attend	Do not remember
Course introduction and plan, general concepts of environmental toxicology (Anders Goksøyr)				1	5		
Exploring target systems and mechanisms of action (Marta Eide)				2	3	1	
Ecotoxicology of nanoparticles (Boris Jovanovic)				3	3		
Microplastics in the environment (Marte Haave)					6		
Contaminants in the food chain and possible human health effects (Jerome Ruzzin)				2	4		
First journal club (Book chapters)				1	5		
Second journal club (Articles)			1	2	3		
The NETS conference			1	3	2		

Please specify any comments to the lectures:

- Good variation, and interesting topics.
- interesting seminars, especially the seminars from Marte Haave and Boris Jovanovic
- very informative
- I liked the variety of topics and that people with expertise in a specific field gave the corresponding lecture.
- Nice with invited researchers who speaks about their research area :)

Please specify any comments to the two journal clubs:

- Liked the first one. The second was a bit hard, because it was hard to understand the journal.
- good possibility to improve presentation skills
- second journal club: positive was the review of every presentation afterwards
- It was a good idea to work both alone and in groups. The course covers different topics but in this way it is easier to learn a bit more about a specific topic.
- It was also good for practicing oral presentation skills
- It was much easier to prepare for the chapter presentations than the article presentations, so I was glad the deadline was extended for the last journal club.

Please specify any comments on the NETS conference:

- Way too much information, and long days. Especially for the students attending "pre-symposium".
- The conference was really interesting! I think it was a great idea to attend NETS conference because we got to know what kind of research is going on in Norway. It was great and very useful to listen to people who do different research than I do.
- Interesting, but difficult to follow some of the speakers because of the detail level. It was also difficult to concentrate about the talks at the end of the long days.

How do you rate your learning outcome from the course? *

	1 (poor)	2	3	4	5 (very good)
				3	3

Do you feel that the efforts you put into the course corresponds to the credits? (5 sp) *

6 Yes, pretty good

(No, The course was way too laborious

Not really, I spent very little time on it)

Would you recommend the course to your fellow students? *

6 Yes

(No, Not sure)