

# Use of Blackboard platform for full eLearning project based course:

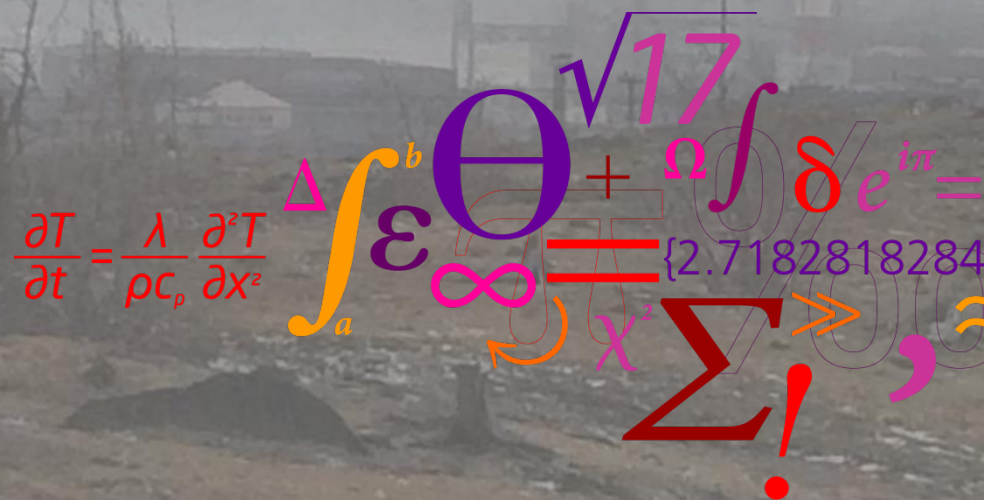
## *Mineral resources in the Arctic:*

## *Environmental impacts and technologies*

**Pernille Erland Jensen <sup>(1)</sup>, Janne Fritt-Rasmussen <sup>(2)</sup>**

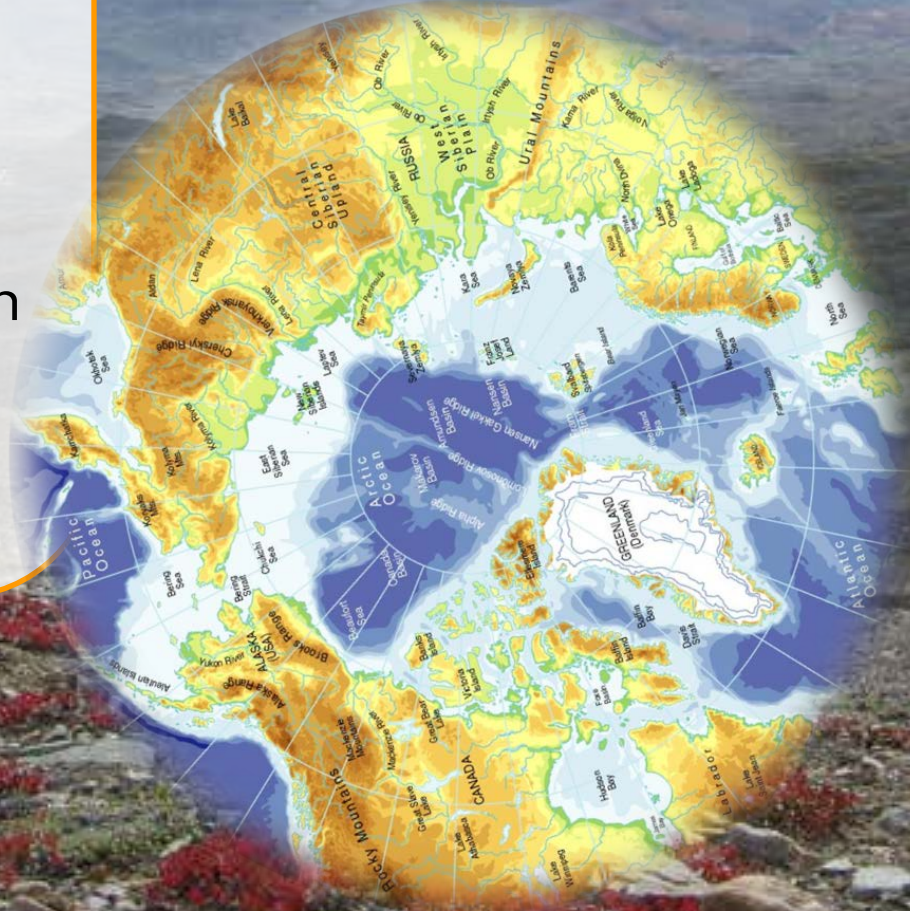
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# Why online?

- Reach students in the circumpolar area incl. Greenland
- Lifelong Learning
- Collaboration between biology students from Aarhus University and engineering students from DTU
- Instructors can focus efforts on other teaching activities than giving lectures.
  - More gain for students
  - More fun for instructors





# Course framing

Teaching method	year	no of students	Peer review of EIA's	Exam
Classroom lecture + group work	2013	9	White-book* + oral presentation	MCQ + oral
Classroom lecture + group work + obligatory MCQs	2014	30	White-book* + oral presentation	Oral
Distance eLearning via Coursera incl. voluntary MCQs	2015 Spring	5	White-book* + oral presentation by use of video-link	Oral
Distance eLearning via Coursera incl. voluntary MCQs	2015 Fall	43	Anonymous peer review of EIA resembling white-book*	Oral
Distance eLearning via Blackboard incl. voluntary MCQs	2016 Fall	22	Peer assessment of EIA chapters resembling white-book*	Oral

# Course framing

## Course introduction



### Course introduction

[Click to Launch](#)



## Mining Part Recommender

### Below is our detailed recommended structure

In this part of the course you are to read the book can be borrowed for free from the library as hardback from the bookstore at DTU or Springer.com. If you want to borrow the book through DTU's intranet [Portalen](#) with your

#### Week 7

- Watch [Land based mines introduction](#) from the Arctic [Aitik](#) (Sweden) + [Red](#)
- Watch [Environmental Ecotoxicology](#) + (Danish only) and/or [Chapman and Rid](#)
- Read [EIA guidelines for mining](#) + read
- Find information for chapter 2 of your writing.

#### Week 8

- Watch [Sulfide waste](#) + read [Lottermos](#)
- Watch [Geochemical tests](#) and [Case s](#)
- Finish up on chapter 2 and hand in for
- Write chapter 3.

## Mining EIA assignment

### Purpose and background:

The purpose of the exercise is to complete parts of an application for a mining exploitation project in Greenland with particular focus on the parts of the EIA related to environmental impacts and mitigation techniques.

The EIA must be handed in in the form of a report with the content described below. You get access to the hand in module when you have enrolled into a group. And you get access to enroll into a group for the Mine EIA assignment after you have handed in the Oil EIA assignment. More information on the group formation below.

### Cases

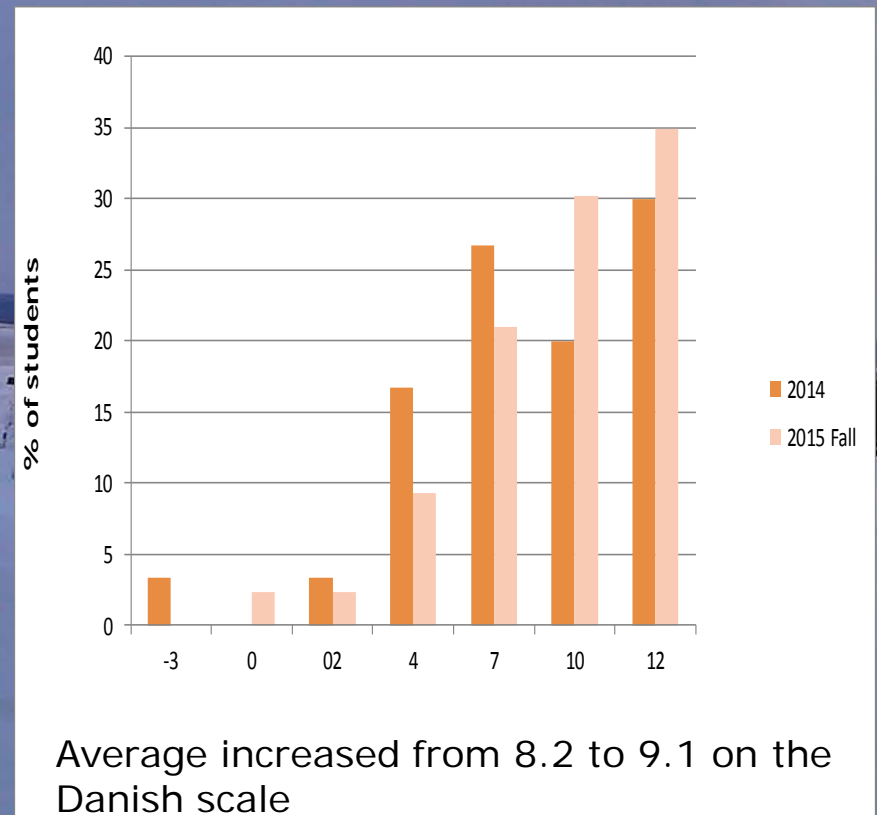
We will assign cases to each group as they are formed. All cases are fictive. A real occurrence of rather undocumented extent and potential is found at the location you get; but the minerals in the real case are different from those you get in your fictive case. In case of conflicts between data existing on the real occurrence and those given by us, use those given by us. You can find the different locations on [this interactive map](#).

### The content of the submitted report should cover the following:

1. Who made the report, in what context (course name), and what is the main content/purpose of the report (**1/2 page**).
2. Description of the environment before mine start (**3 pages**). *Remember to hand in chapter 2 below for peer review before the deadline.*
  - a. Describe the areas geography, climate and environmental status. This chapter must include information and maps to support the description. The necessary information + maps are to be found by use of the online sources: [Areas important to wildlife](#), [DMI](#) and [Nuna GIS](#) and [google earth](#). Mention all vulnerable areas that might be affected, and how.
  - b. An environmental study plan, i.e. an argued list of what knowledge is missing (an example of such missing knowledge could be information of the background zinc concentration).

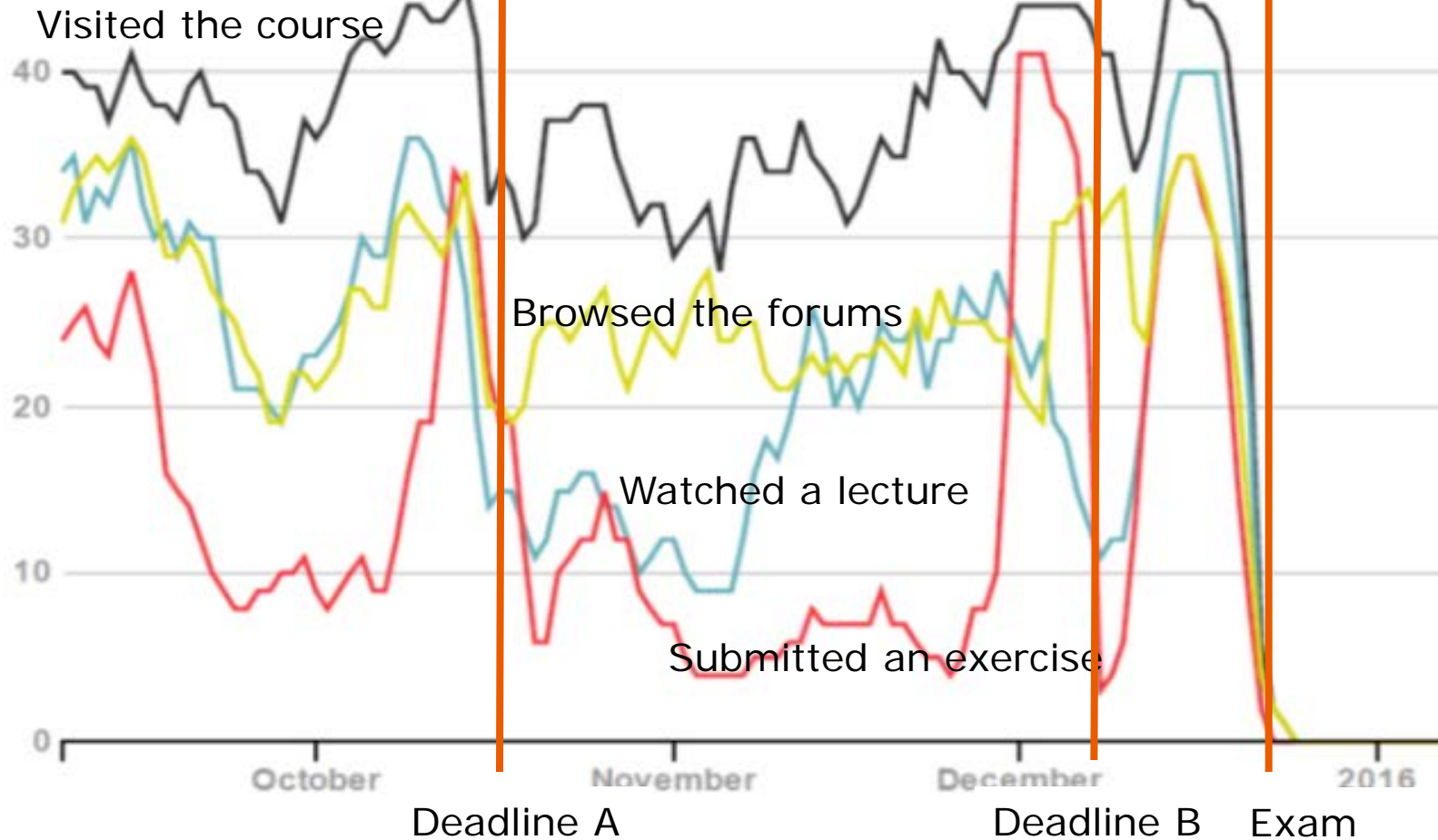
## Did we reach goals?

- Students in Greenland + oil platform.
- Lifelong learning waiting.
- One student from AU.
- Gain for students, instructors and – with time course responsables.

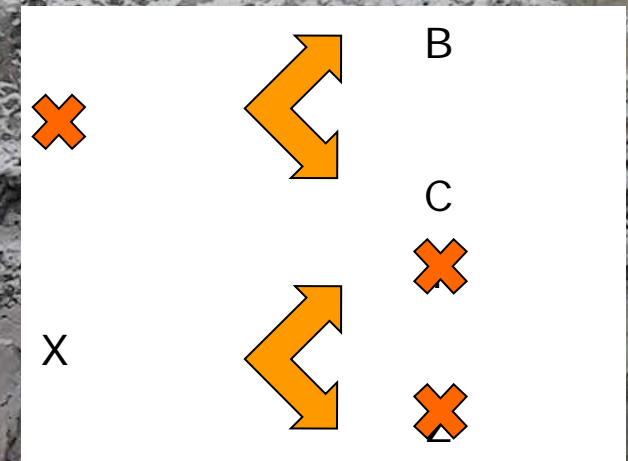




# Student engagement



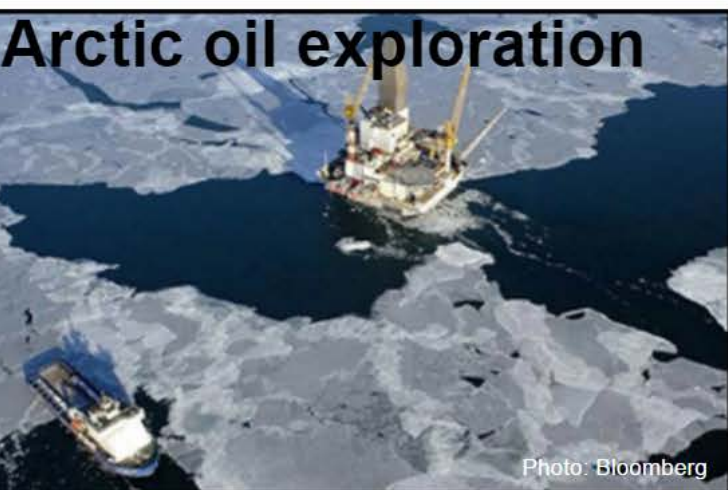
# Issues



- Lacking student hand in for peer assessment (a problem – make compulsory)
- Lacking student engagement in blog (is that a problem?)
- Students lacking courage to build groups with foreigners (a learning-problem – form compulsory groups)
- *Course homepage functions not working*
- *Rubrics for grading not working*



# iSpring videos



Environmental Impacts  
Mitigation Technologies



## OUTLINE

## NOTES

Search...



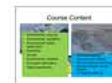
1. Welcome to course  
Arctic mineral resources:  
Environmental impacts a



2. Course Scope



3. Course Responsible



4. Course Content



5. Course homepage



6. Grading



7. Course homepage



8. Course homepage



9. Teachers



Oil  
part

Teach

# Teachers

Mine part



Janne Fritt-Rasmussen, AU



Pernille E. Jensen, DTU



David Boertmann, AU



Susse Wegeberg, AU



Lis Bach, AU



Jens Søndergaard, AU



Kristine Pedersen  
Akvaplan NIVA



Jakob Tougaard, AU



Anders Mosbech, AU



Gert Asmund, AU