

# Basic Project 1: Applications of Science in Technology and Society

## About the course

subject	Den internationale naturvidenskabelige bacheloruddannelse
Activity type	basic project
Teaching language	English
Registration	<p>Students will be registered automatically, but have to confirm this registration by signing up for exam as a group. If you have to sign up for the project again, please contact <a href="mailto:inm-exams@ruc.dk">inm-exams@ruc.dk</a>.</p> <p><b>Remember to sign up for the Prerequisites for participation in the exam when signing up</b></p>
Detailed description of content	<p>The project should be based on a research question that sheds light on applications of natural science for external purposes, typically within technology and society, where natural science is used for identifying challenges or solving such challenges.</p> <p>The project work thus lends itself to immersion in how scientific knowledge, theories, methods, and results can be used outside the sciences. The projects can be said to be "with" science. Natural science is understood to be the subjects affiliated with Nat Bach, including chemistry, computer science, environmental biology, geography, mathematics, medical biology, molecular biology and Tek Sam.</p> <p><b>You can read about the study programme, project work, studycurriculum, rules and more at the <a href="#">intranet</a></b></p>
Project Process	<p>The project is problem-oriented, exemplary and participant-led. The project work must develop the student's skills in applying scientific theories and methods during work with a limited academic field. The project work involves an optional and independent formulation of a problem, so that the project provides an exemplary realization of the purpose of the project in question. The project work concludes with the preparation of a project report.</p> <p>As an integrated element of the project, the student's competence in academic communication is developed through oral presentations.</p>
Expected work effort (ECTS-declaration)	<p>Project work is 15 ECTS corresponding to a 405 hour workload. Nat Bach has issued a guide for the workload during the semester <a href="#">intranet-side</a></p> <ul style="list-style-type: none"><li>• Start-up/group formation: 28 hours</li><li>• Research-question seminar: 4 hours</li><li>• Mid-term evaluations: 3 hours</li><li>• Internal evaluation: 3 hours</li><li>• Presentation seminar: 4 hours</li><li>• Project exam: 2 hours</li><li>• Group supervision (incl. Practical help in ex lab/field): ca. 25 hours</li><li>• <b>in total = 69 hours</b></li><li>• Report writing: 85 hours</li><li>• Literature search and processing in group: 115 hours</li><li>• Practical work e.g. lab, model design, analysis, fieldwork: 110 hours</li><li>• Exam preparation: 25 hours</li></ul> <p><b>- In total: 405 hours</b></p>
Head of studies/academic coordinator	Martin Niss ( <a href="mailto:maniss@ruc.dk">maniss@ruc.dk</a> )
Administration of exams	INM Registration & Exams ( <a href="mailto:inm-exams@ruc.dk">inm-exams@ruc.dk</a> )
Responsible for the activity	Martin Niss ( <a href="mailto:maniss@ruc.dk">maniss@ruc.dk</a> ) Kristine Niss ( <a href="mailto:kniss@ruc.dk">kniss@ruc.dk</a> )

## Learning outcomes and assessment criteria

- Knowledge and understanding of the possibilities and limitations of Natural Sciences as a tool in practical, technical and societal contexts
- Knowledge of fundamental concepts, theories and methods within the Natural Sciences relevant to the chosen issue
- Skills to be able to formulate and delimit a relevant issue
- Skills to be able to produce and/or obtain as well as analyze and interpret empirical data using quantitative and qualitative methods
- Skills to be able to read and use specialized symbolic language and other formal representations
- Skills to be able to undertake simple mathematical problem-solving
- Skills to be able to select and use of relevant IT tools in relation to project work
- Skills to be able to select and draw connections upon relevant scientific literature
- Skills to be able to communicate in academic terms with in a chosen project subject, both orally and in writing
- The competences to be able to identify, acknowledge, describe, delimit and analyze issues using natural scientific theories and methods, both independently and in collaboration with others
- The competence to be able to view issues from an interdisciplinary perspective and proposing solutions by drawing on relevant theories, methods and perspectives from several subject areas
- The competences to be able to undertake relevant experimental work or other forms of empirical investigation
- The competence to be able develop and analyze simple mathematical or natural scientific models
- The competence to be able to reflect on how knowledge within Natural Sciences contributes to and is challenged by societal development
- The competence to be able to organize and manage a project within an established framework and with in the deadlines
- The competence to be able to articulate one's own competences and academic challenges
- The competence to be able to communicate academically, both orally and in writing

## Overall content

The purpose of the project is for the student to gain experience with natural science as a tool in practical, technical and societal contexts through work with a representative example.

## Prerequisites for participation in the exam

Approval of the project work is contingent on the student having actively and satisfactorily participated in the project, including with respect to the following elements of the project work:

- The project formation process, including the study portfolio as well as selection and delimitation of the project's problem
- Problem statement seminar, where the problem statement is presented and discussed
- The halfway evaluation, including in relation to the drafting of the written halfway evaluation presentations as well as in the group's opponent role at the halfway evaluation.
- The group's preparation of the project report and any other products.
- The group's presentation of the project and their opponent role at the internal final evaluation

## Teaching and working methods

The project is problem-oriented, exemplary and participant-led. The intention of the project work is to develop the student's proficiency in applying theories and methods within the Natural Sciences while working on a delimited academic area. The project work entails the student to independently formulate a problem statement of their own choice so that the project provides an exemplary realisation of the purpose of the project in question.

Over the course of the project work, the group will undergo an evaluation together with the supervisor in connection with the halfway evaluation and once more at the end of the project.

## Type of activity

Project

## Form of examination (p1)

Oral group exam for the participants in the project.

The starting point for the oral exam is the project report and any supplementary material. The exam includes individual presentations within one of the topics selected by the examiner, which will be communicated to the students no later than 3 working days prior to the exam. Each individual presentation may last up to 5 minutes. A dialogue between the student(s) and the assessors about the project, will be conducted after the individual presentation(s).

There may be posed questions related to the subject area of the project report.

The assessment is individual and is based on the project report, any additional material and the student's oral performance.

Permitted group size: 3-7 students.

The character limits of the project report are:

For 3 students: 24,000-192,000 characters, including spaces.

For 4 students: 24,000-192,000 characters, including spaces.

For 5 students: 24,000-204,000 characters, including spaces.

For 6 students: 24,000-204,000 characters, including spaces.

For 7 students: 24,000-204,000 characters, including spaces.

The character limits include the cover, table of contents, summary, bibliography, figures and other illustrations, but exclude appendices.

The project report must include a summary in English, that is part of the assessment.

Time allowed for the exam including time used for assessment is for:

3 students: 75 minutes.  
4 students: 90 minutes.  
5 students: 105 minutes.  
6 students: 120 minutes.  
7 students: 135 minutes.

Writing and spelling skills in the project report are part of the assessment.

Permitted support and preparation materials at the oral exam: All

Assessment: 7-point grading scale  
Moderation: Internal co-assessor.

Form of Re-  
examination  
(p1)

Samme som ordinær eksamen

Exam code(s)      Exam code(s) : U26528

## Course days:

**Hold: 1**

### BP1 - Project Formation (NIB)

time      02-09-2024 08:15 til  
            02-09-2024 12:00

location   11.1-047 - studiesal (40) / 11.2-047 - gl. natfagsal (65)

### BP1 - Project Formation (NIB)

time      03-09-2024 08:15 til  
            03-09-2024 16:00

location   11.2-047 - gl. natfagsal (65)

### BP1 - Project Formation (NIB)

time      04-09-2024 08:15 til  
            04-09-2024 12:00

location   11.2-047 - gl. natfagsal (65)

### BP1 - Project Formation (NIB)

time      06-09-2024 08:15 til  
            06-09-2024 12:00

location   25.1-035 - teorirum 25.1 (130)

## BP1 - Deadline for project descriptions with indication of wishes for supervisor (NIB)

time 06-09-2024 17:00 til  
06-09-2024 17:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

## BP1 - Project Formation (NIB)

time 09-09-2024 08:15 til  
09-09-2024 12:00

location 07.2-008 - undervisningslokale (128)

## BP1 - Deadline for signing up for projects at STADS (NIB)

time 10-09-2024 23:59 til  
10-09-2024 23:59

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

## BP1 - Project Formation (NIB)

time 11-09-2024 08:15 til  
11-09-2024 12:00

location 07.2-008 - undervisningslokale (128)

## BP1 - Research question seminar (NIB)

time 25-09-2024 08:15 til  
25-09-2024 12:00

location 25.3-005 - teorikum 25.3 (80)

## BP1 - Laboratory safety course (NIB)

time 02-10-2024 08:15 til  
02-10-2024 17:00

location room-15.2-021 / room-15.2-047 / room-15.2-013 / 15.0-003 - auditorie 15 (68) / room-15.2-039

Teacher William Goldring ( goldring@ruc.dk )

## BP1 - Midterm Evaluation (NIB)

time 16-10-2024 08:15 til  
01-11-2024 18:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

## BP1 - Internal Evaluation (NIB)

time	03-12-2024 08:15 til 05-12-2024 18:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt

## BP1 - Project Hand-in (Ordinary Exam)(NIB)

time	18-12-2024 10:00 til 18-12-2024 10:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt

## BP1 - Presentation seminar (NIB)

time	17-01-2025 08:15 til 17-01-2025 12:00
location	03.1-s03 - auditorie a (120)

## BP1 - Project examination (Ordinary Exam)(NIB)

time	23-01-2025 08:15 til 31-01-2025 18:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt

## BP1 - Project reexamination (Ordinary Reexam) (NIB)

time	03-02-2025 08:15 til 28-02-2025 18:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt

Content

The common study regulations § 18, 5:

A student who has failed to pass an ordinary project examination is automatically registered for the re-examination. The student is entitled to make changes to the failed project report. The project report must be submitted no later than 14 days after the date for the ordinary project examination