

# 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> )  |

**Pr. 1. september 2023 er gruppestørrelsen på Basisprojekter og Fagmodulprojekter altid minimum 3 studerende. Dette gælder også selvom der måtte stå andet andre steder.**

**As per 1 September 2023, the size of the project groups for basic and subject module projects is always minimum 3 students, even if it says otherwise elsewhere.**

ECTS

15

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 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: 2-7 students.

The character limits of the project report are:

For 2 students: 24,000-180,000 characters, including spaces.

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 any appendices.

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

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

2 students: 60 minutes.

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 01-09-2023 08:15 til  
01-09-2023 12:00

location 11.2-047 - gl. natfagsal (65)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

### BP1 - Project Formation (NIB)

time 04-09-2023 08:30 til  
04-09-2023 12:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

location 11.2-047 - gl. natfagsal (65)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## BP1 - Project Formation (NIB)

time 05-09-2023 12:15 til  
05-09-2023 17:00

location 11.2-047 - gl. natfagsal (65)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## BP1 - Project Formation (NIB)

time 06-09-2023 09:00 til  
06-09-2023 12:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

location 11.2-047 - gl. natfagsal (65)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## BP1 - Project Formation (NIB)

time 07-09-2023 08:30 til  
07-09-2023 12:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

location 11.2-047 - gl. natfagsal (65)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## BP1 - Project Formation (NIB)

time 08-09-2023 09:00 til  
08-09-2023 12:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

location 11.2-047 - gl. natfagsal (65)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

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

time 08-09-2023 17:00 til  
08-09-2023 17:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

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

time 12-09-2023 23:59 til  
12-09-2023 23:59

|                         |            |
|-------------------------|------------|
| forberedelsesnorm       | ikke valgt |
| forberedelsesnorm D-VIP | ikke valgt |

## BP1 - Research question seminar (NIB)

|          |  |
|----------|--|
| time     | 29-09-2023 08:15 til<br>29-09-2023 12:00 |
| location | 11.2-047 - gl. natfagsal (65)            |
| Teacher  | Nicholas Bailey ( nbailey@ruc.dk )       |

## BP1 - Laboratory safety course (NIB)

|                         |  |
|-------------------------|--|
| time                    | 04-10-2023 08:15 til<br>04-10-2023 16:00 |
| forberedelsesnorm       | ikke valgt                               |
| forberedelsesnorm D-VIP | ikke valgt                               |
| location                | 15.0-003 - auditorie 15 (68)             |
| Teacher                 | William Goldring ( goldring@ruc.dk )     |

## NIB Class meeting (NIB Lounge in building 12)

|                         |  |
|-------------------------|--|
| time                    | 13-10-2023 12:10 til<br>13-10-2023 12:55 |
| forberedelsesnorm       | ikke valgt                               |
| forberedelsesnorm D-VIP | ikke valgt                               |

## BP1 - Midterm Evaluation (NIB)

|                         |  |
|-------------------------|--|
| time                    | 18-10-2023 08:15 til<br>03-11-2023 18:00 |
| forberedelsesnorm       | ikke valgt                               |
| forberedelsesnorm D-VIP | ikke valgt                               |

## NIB Class meeting (NIB Lounge in building 12)

|                         |  |
|-------------------------|--|
| time                    | 10-11-2023 11:00 til<br>10-11-2023 12:00 |
| forberedelsesnorm       | ikke valgt                               |
| forberedelsesnorm D-VIP | ikke valgt                               |

## NIB Class meeting (NIB Lounge in building 12)

|                   |  |
|-------------------|--|
| time              | 04-12-2023 11:00 til<br>04-12-2023 12:00 |
| forberedelsesnorm | ikke valgt                               |

forberedelsesnorm D-VIP ikke valgt

## BP1 - Internal Evaluation (NIB)

time 05-12-2023 08:15 til  
07-12-2023 18:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

## BP1 - Project Hand-in (NIB)

time 19-12-2023 10:00 til  
19-12-2023 10:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

## BP1 - Presentation seminar (NIB) - note: building 03

time 12-01-2024 10:00 til  
12-01-2024 12:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

location 03.1-s03 - auditorie a (120)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## BP1 - Project examination (NIB)

time 18-01-2024 08:15 til  
31-01-2024 18:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

## BP1 - Project reexamination (NIB)

time 01-02-2024 08:15 til  
29-02-2024 18:00

forberedelsesnorm ikke valgt

forberedelsesnorm ikke valgt  
D-VIP

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