

## Integrated Science

Title	Integrated Science
Semester	F2023
Master programme in	Mathematical Physical Modelling / Mathematical Computer Modelling / Mathematical Bioscience / Physics and Scientific Modelling
Type of activity	Course
Teaching language	English
Study regulation	Read about the Master Programme and find the Study Regulations at <a href="https://ruc.dk">ruc.dk</a>  Læs mere om uddannelsen og find din studieordning på <a href="https://ruc.dk">ruc.dk</a>

### REGISTRATION AND STUDY ADMINISTRATIVE

Registration	<p>Sign up for study activities at <a href="#">stads selvbetjening</a> within the announced registration period, as you can see on the <a href="#">Studyadministration homepage</a>.</p> <p>When signing up for study activities, please be aware of potential conflicts between study activities or exam dates.</p> <p>The planning of activities at Roskilde University is based on the recommended study programs which do not overlap. However, if you choose optional courses and/or study plans that goes beyond the recommended study programs, an overlap of lectures or exam dates may occur depending on which courses you choose.</p>
Number of participants	
ECTS	5
Responsible for the activity	Nicholas Bailey ( <a href="mailto:nbailey@ruc.dk">nbailey@ruc.dk</a> )
Head of study	Studieleder for Fysik ( <a href="mailto:fys-sl@ruc.dk">fys-sl@ruc.dk</a> )
Teachers	
Study administration	INM Registration & Exams ( <a href="mailto:inm-exams@ruc.dk">inm-exams@ruc.dk</a> )
Exam code(s)	U60197

### ACADEMIC CONTENT

Overall objective	The purpose of the course is to provide the student with an overview of the application, reflection and internal subject-matter perspectives in the field of mathematics and physics
Detailed description of content	<p>Understand and compare the content of 2-3 IMFUFA seminars. There are 10-11 seminars during a semester and the program will be available around the start of semester.</p> <p>It is expected that students attend most or all of the seminars. The program will give the speaker names, titles and abstracts of the seminars.</p> <p>Students choose two or three seminars and a theme through which to compare them. The theme can be rather broadly defined, for example "different types of mathematical modelling".</p> <p>They write a report summarizing each seminar, including relevant background knowledge and a brief discussion of the connection with the theme for each seminar.</p> <p>An brief overall introduction is also expected.</p>
Course material and Reading list	There is no pre-assigned syllabus/reading list. The program for IMFUFA Seminars contains abstracts for the seminars and in some cases references to relevant scientific literature.
Overall plan and expected work effort	<p>The course gives 5 ECTS points; 5 ECTS corresponds to 135 hours of work.</p> <p>Student effort is allocated as follows (135 hours total):</p> <ul style="list-style-type: none"> <li>• 20 hours seminar attendance (10-11 seminars, 2 hours per seminar)</li> <li>• 10 hours preparation (one per seminar) 10 hours post-seminar synopsis writing (one per seminar)</li> <li>• 90 hours report writing including literature search, initial draft, final draft</li> <li>• 5 hours supervision/feedback sessions</li> </ul>
Format	
Evaluation and feedback	<p>The course includes formative evaluation based on dialogue between the students and the teacher(s).</p> <p>Students are expected to provide constructive critique, feedback and viewpoints during the course if it is needed for the course to have better quality. Every other year at the end of the course, there will also be an evaluation through a questionnaire in SurveyXact. The Study Board will handle all evaluations along with any comments from the course responsible teacher.</p> <p>Furthermore, students can, in accordance with RUCs 'feel free to state your views' strategy through their representatives at the study board, send evaluations, comments or insights from the course to the study board during or after the course.</p>
Programme	The detailed program, containing the speakers, titles and abstracts, will be available at the start of each semester.

## ASSESSMENT

Overall learning outcomes

After completing the course the students will be able to

- Explain and understand different scientific subject-matters and perspectives in the field of mathematics and physics.
- explain and analyse differences and similarities between examples of mathematical-physical models
- explain and analyse differences and similarities between examples of application, reflection and internal subject-matter perspectives in the field of mathematics and physics
- convey and communicate accurately different perspectives in the field of mathematics and physics

Form of examination

Individual written take-home assignment.

The character limit of the assignment is: 24,000-48,000 characters, including spaces.

The character limit includes the cover, table of contents, bibliography, figures and other illustrations, but exclude any appendices.

The students start writing the take-home assignment during the course. The duration is 28 days and may include public holidays. The submission deadline will be announced on [study.ruc.dk](http://study.ruc.dk).

Assessment: Pass/Fail.

Form of Re-examination

Samme som ordinær eksamen / same form as ordinary exam

Type of examination in special cases

Examination and assessment criteria

The report will be evaluated on how well the student has been able to summarize and explain the essential content of the chosen seminars and connect them to the chosen theme.

The students performance will be assessed by the following assessment criteria

- Explain and understand different scientific subject-matters and perspectives in the field of mathematics and physics.
- explain and analyse differences and similarities between examples of mathematical-physical models
- convey and communicate accurately different perspectives in the field of mathematics and physics

Exam code(s)

Exam code(s) : U60197

Course days:

Hold: 1

## Integrated Science - Project Presentations (PSM)

time	01-02-2023 14:00 til 01-02-2023 16:00
forberedelsesnorm	ikke valgt
forberedelsesnorm D-VIP	ikke valgt
location	27.1-089 - teorirum 27 (66)
Teacher	Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science (PSM)

time	08-02-2023 14:15 til 08-02-2023 16:00
location	27.1-089 - teorirum 27 (66)
Teacher	Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science (PSM)

time	15-02-2023 14:15 til 15-02-2023 16:00
location	27.1-089 - teorirum 27 (66)
Teacher	Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science (PSM)

time	22-02-2023 14:15 til 22-02-2023 16:00
location	27.1-089 - teorirum 27 (66)
Teacher	Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science (PSM)

time	01-03-2023 14:15 til 01-03-2023 16:00
location	27.1-089 - teorirum 27 (66)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science - Problem Formulation Seminar (PSM)

time 08-03-2023 14:00 til  
08-03-2023 16:00

location 27.1-089 - teorirum 27 (66)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science (PSM)

time 15-03-2023 14:15 til  
15-03-2023 16:00

location 27.1-089 - teorirum 27 (66)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science (PSM)

time 22-03-2023 14:15 til  
22-03-2023 16:00

location 27.1-089 - teorirum 27 (66)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science (PSM)

time 29-03-2023 14:15 til  
29-03-2023 16:00

location 27.1-089 - teorirum 27 (66)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science (PSM)

time 05-04-2023 14:15 til  
05-04-2023 16:00

location 27.1-089 - teorirum 27 (66)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science (PSM)

time 12-04-2023 14:15 til  
12-04-2023 16:00

location 27.1-089 - teorirum 27 (66)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science (PSM)

time 19-04-2023 14:15 til  
19-04-2023 16:00

location 27.1-089 - teorirum 27 (66)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science (PSM)

time 26-04-2023 14:15 til  
26-04-2023 16:00

location 27.1-089 - teorirum 27 (66)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science (PSM)

time 03-05-2023 14:15 til  
03-05-2023 16:00

location 27.1-089 - teorirum 27 (66)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science (PSM)

time 10-05-2023 14:15 til  
10-05-2023 16:00

location 27.1-089 - teorirum 27 (66)

Teacher Nicholas Bailey ( nbailey@ruc.dk )

## Integrated Science - Hand-in of take-home assignment

time 25-05-2023 10:00 til  
25-05-2023 10:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt

## Integrated Science - Hand-in of take-home assignment (reexam)

time 30-06-2023 10:00 til  
30-06-2023 10:00

forberedelsesnorm ikke valgt

forberedelsesnorm D-VIP ikke valgt