



# Master of Science (MSc) in Physics

Two-year MSc programme in Physics at the University of Iceland (UoI)  
in partnership with  
the Nordic Institute of Theoretical Physics (Nordita).

The programme is offered in English.

**Programme Aim:** The programme aims to provide students with up-to-date knowledge of contemporary physics in the main areas of astrophysics, condensed matter physics and high-energy physics, as well as solid training in applying mathematical and numerical tools widely used in these fields. The programme also offers a course to develop professional skills such as writing and presenting scientific content.

[Nordita](#) is the *Nordic Institute for Theoretical Physics*. Its purpose is to carry out research and strengthen Nordic collaboration within theoretical physics. Nordita has traditionally provided training for graduate students as well as junior scientists.

The [Faculty of Physical Sciences](#) and the [Science Institute](#) within the [UoI](#) are the leading research institutions in Iceland in the Physical Sciences. Research in experimental and theoretical physics is carried within the [Mathematics](#) and Physics Divisions of the [Science Institute](#) at the UoI. [Staff members](#) at both divisions will be involved in teaching as well as supervising projects within the MSc programme.

**Programme Structure:** 60 ECTS in graduate coursework and 60 ECTS research based thesis project. Both of these components are provided in collaboration between UoI and Nordita Faculty. Students are assigned a supervisor who will guide them through their coursework and to develop a thesis topic.

**Study Track:** The coursework consists of a set of 4 core graduate courses in theoretical physics (40 ECTS in total), complemented with 2 courses in developing skills in statistical methods and research communication (10 ECTS in total). Finally, students in coordination with their supervisors, select a specialised course (10 ECTS) in line with their research thesis project.

Course Curriculum			Timeline (preliminary)
Core Courses	Advanced Topics in Classical Physics (10 ECTS)**		Fall 2021
	Advanced Topics in Electrodynamics (10 ECTS)*		Fall 2021
	General Relativity (10 ECTS)*		Spring 2022
	Quantum Field Theory (10 ECTS)		Spring 2022
Transferable	Seminar on Research Communication (4 ECTS)		Fall 2021
	Statistical methods in Data Analysis (6 ECTS)*		Spring 2022
<b>Specialisation</b> (10 ECTS course plus 60 ECTS thesis)			
Astrophysics	Condensed Matter	Theoretical/Mathematical Physics	Fall 2021
MSc Thesis research project			Fall 2022 Spring 2023

Legend:

\* Courses taught by Nordita lecturers.

\*\* Course taught in collaboration between Nordita and UoI lecturers.



**Research lines for thesis projects:** Research projects can be developed/pursued in one of the three main areas of expertise present at UoI and Nordita: Astrophysics, Condensed Matter Physics, and Theoretical High Energy Physics. Each student will have a supervisor at UoI, but projects can be co-supervised by Nordita faculty.

**Admission:** For admission requirements, application procedure, and additional information, please follow the guidelines at the official webpages for [Master studies at UoI](#), and [at the School of Engineering and Natural Sciences](#). **In addition, applicants are required to give notice of their application to the local coordinators of the programme by sending a brief e-mail to the addresses below.** Notice that the UoI charges a one-time application fee of 8,000 ISK. In addition, there is a yearly fee of 75,000 ISK for the duration of the programme. Pending on securing funding (TBA), there might be a few scholarships available to partially support the living expenses (and/or UoI fees) of a selection of the students accepted into the programme.

For current and additional information on the programme, research lines, as well as a list of affiliated staff members, please visit this [website](#). For detailed information about the programme, please feel free to contact the local coordinators of the programme at UoI:

Associate Prof. Jesús Zavala Franco ([jzavala@hi.is](mailto:jzavala@hi.is))

Prof. Valentina Giangreco Puletti ([vgmp@hi.is](mailto:vgmp@hi.is))

Prof. Sigurður Örn Stefánsson ([sigurdur@hi.is](mailto:sigurdur@hi.is))