



(A) GENERAL DATA

Title	Master's Programme in Physics
Degree	Physicist
Type	Degree program
Level	Master level
Accreditation number	FF/1443-2/2015.
Faculty	Faculty of Science
Institute	Institute of Physics
Language	English
Duration	4 semester
ECTS credits	120
Place	Lágymányosi Campus
Minimum number of new students¹	5
Maximum number of new students	30

¹ If the number of admitted students does not reach threshold the program may be cancelled.



(B) PROGRAM CONTENT

Short description:

The program in physics offers both the development of a broad background in the major fields of physics (atomic and molecular physics, condensed matter physics, nuclear physics, particle physics, statistical physics), and the specialization in selected areas (atomic and molecular physics, astrophysics, biophysics, condensed matter physics, computational physics, environmental physics, particle physics, statistical physics and complex system). The types of courses taken by the students include lectures, problem solving courses, student seminars, laboratory work, and a research project supervised by an expert in the field.

Strength of program:

The Institute of Physics employs close to one hundred professors working in very diverse fields of physics. These professors are internationally renowned experts of their fields, and collaborate with several research institutes and universities both in Hungary and abroad. Thus, our students have the chance to select their research fields from a large variety of choices according to their interests, to pursue their research in the forefront of physics, and to become part of the international scientific community.



(C) STRUCTURE

Training programme in English (identical to the Hungarian programme)

website:

http://to.ttk.elte.hu/sites/default/files/fizikus_20160511_mod_2016.05.13.xls#overlay-context=mesterszakos-tantervek

courses <i>course leader</i>	semesters				course credit number	type of assessment (exam / pcm / other) (pcm = practical course mark)
	1.	2.	3.	4.		
	number of hours per week (number of hours per semester = 13 x number of hours per week) course type (lect / pc / lab / sem / cons)					
Core foundation courses						
A-1. Group theory <i>Péter Bántay</i>	2 lect				2	exam
A-2. Computer simulations <i>István Csabai</i>	2 lect				2	exam
A-3. Methods of applied physics laboratory <i>Zoltán Dankházi</i>	2 lab				3	pcm
total	4 lect 2 lab	0	0	0	7	2 exam, 1 pcm
Specialized core courses						
T-1. Atomic and molecular physics <i>András Csordás</i>	2 lect 1 pc				4+0	exam



T-2. Nuclear physics <i>Attila Csótó</i>	2 lect 1 pc				4+0	exam
T-3. Particle physics <i>László Palla</i>	2 lect 1 pc				4+0	exam
T-4. Statistical physics <i>József Cserti</i>	2 lect 1 pc				4+0	exam
T-5. Solid state physics <i>József Cserti</i>	3 lect 1 pc				5+0	exam
total	11 lect 5 pc	0	0	0	21	5 exam

Specialized differentiated courses

Obligatory differentiated module <i>(see the modules below)</i>		6	6		18	
Obligatory differentiated courses from the modules <i>(see the modules below)</i>		4	2		9	
Advanced level laboratory <i>(see the laboratories below)</i>		5			7	
Regulated optional courses <i>(as detailed below)</i>	2	6	8	6	22	
total	2	21	16	6	56	

thesis		5 cons	10 cons	30 cr	final exam
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total so far	24	21	21	22	114 cr	
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optional courses						
<i>any course at ELTE</i>					total 6 cr	



Regulated optional courses:

- those courses of the modules and specializations that were not taken for completing either the obligatory differentiated module or the specialization, or
- the annually changing contingent of special courses and seminars announced by the Institute of Physics, or
- special courses announced by the other institutes of the Faculty and accepted by the Institute of Physics.

Three of the regulated optional courses have to be seminars, and in at least one of these a talk in English has to be given.



(D) CAREER

Career opportunities:

Due to the high level of skills and knowledge provided by the MSc program in physics, most students continue their studies in PhD programs. Others go to industry and pursue their career in research and development. The problem solving and computational skills gained through studying physics also allow our students to become successful in areas very different from physics, such as economy, informatics, or engineering.

Job examples:

- physicist specialized in astrophysics,
- physicist specialized in particle physics,
- physicist specialized in atomic and molecular physics,
- physicist specialized in nuclear and heavy ion physics,
- physicist specialized in biological physics,
- physicist specialized in condensed matter physics,
- physicist specialized in medical biophysics,
- physicist specialized in statistical physics,
- physicist specialized in computational physics



(E) ADMISSIONS FOR THE ACADEMIC YEAR 2017/2018

TUITION AND OTHER FEES

	EU/EEA students	non-EU/EEA students
Tuition fee/semester	4190 (EUR)*	4190 (EUR)*
Application fee	160 (EUR)	160 (EUR)
Registration fee	60 (EUR)	60 (EUR)

* It is possible to apply for scholarship to reduce tuition fee.

Offered for the academic year 2017/2018?	YES
Deadline for applications – September intake	31 JULY 2017 for EU students 31 MAY 2017 for non-EU students
Is there a February intake?	NO

Admission requirements – Language requirements:

A good working knowledge of English language is required.

Admission requirements – Documents to submit with application:

- ✓ Bachelor-level degree
- ✓ Transcript of records
- ✓ CV
- ✓ Motivation letter
- ✓ Application form
- ✓ Copy of the main pages of the passport (needs to be valid)
- ✓ Passport photo
- ✓ Copy of application fee transfer
- ✓ Other: English language certificate

Application procedure:

To apply to the program please contact the program coordinator or the student advisor. After receiving all required forms and documents an interview will be held (the interview can be carried out via the Internet). Further information about the application procedures and forms can be found at the website of the program:

<https://fizika.elte.hu/en/index.php?page=content&cid=1&pid=28>



Procedure of the entrance examination:

The entrance examination consists of a written part and an oral part. Both are held through Skype, except if the applicant stays in Budapest. In the latter case the entrance examination is held in the Institute of Physics. The applicant will be notified about examination dates by E-mail.

The written part consists of problem solving. Four problems are to be solved within 120 minutes. The problems are in classical mechanics, electrodynamics, quantum mechanics and statistical physics, all at BSc level. Detailed topics are available at

<https://fizika.elte.hu/en/index.php?page=content&cid=1&pid=17#Theoretical%20Mechanics%20A>

Following the evaluation, those who pass the written part will be interviewed through Skype. The applicant will be notified about the result of the examination by E-mail.



(F) CONTACT

Program leader

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