

## M.Sc. in Physics Admission Requirements

University Requirements (Cr)	Research Requirements (Cr)	Program Requirements (Cr)	Total (Cr)
5	17	18	40
12.5%	42.5%	45.0%	100%

### 1. University Requirements

The aim of university requirements is to provide UST students with scientific English writing skills and scientific communication and discussion skills.

University Requirements (5 Cr)					
Course Code	Course Title	Cr	L	P	Prerequisite
ENG 601	Scientific English Writing	3	3	0	
PHY 691	Graduate Seminar 1	1	1	0	
PHY 692	Graduate Seminar 2	1	1	0	

### 2. Research Requirements

Research Requirements (17 Cr)					
Course Code	Course Title	Cr	L	P	Prerequisite
PHY 694	M.Sc. Thesis 1	2	0	6	
PHY 695	M.Sc. Thesis 2	3	0	9	
PHY 696	M.Sc. Thesis 3	3	0	9	
PHY 697	M.Sc. Thesis 4	3	0	9	
PHY 698	M.Sc. Thesis 5	3	0	9	
PHY 699	M.Sc. Thesis 6	3	0	9	

### 3. Program Requirements

The aim of program requirements is to provide M.Sc. students of physics of earth and universe program in UST with essential skills and knowledge. Program requirements include courses of basic knowledge essential to all graduate students of physics and astronomy program such as classical mechanics, quantum mechanics, and electrodynamics.

Program Requirements (18 Cr)					
Course Code	Course Title	Cr	L	P	Prerequisite
PHY 601	Quantum Mechanics I	3	3	0	
PHY 602	Quantum Mechanics II	3	3	0	
PHY 603	Electrodynamics I	3	3	0	
PHY 607	Classical Mechanics	3	3	0	
PHY Electives		6			

### 1. Physics Electives

The student must select 2 courses from the following list (Min 6 Cr)					
Course Code	Course Title	Cr	L	P	Prerequisite
MATH 503	Advanced Linear Algebra	3	3	0	
NANENG 616	Nanophotonics	3	3	0	
PHY 603	Electrodynamics I	3	3	0	
PHY 604	Electrodynamics II	3	3	0	
PHY 605	Statistical Mechanics I	3	3	0	
PHY 606	Statistical Mechanics II	3	3	0	
PHY 607	Classical Mechanics	3	3	0	
PHY 608	Mathematical Physics I	3	3	0	
PHY 611	Quantum Field Theory I	3	3	0	
PHY 617	Chemical Biology	3	3	0	
PHY 618	Cellular Biochemistry	3	3	0	
PHY 619	Applied molecular modelling	3	3	0	
PHY 620	Optics and Spectroscopy	3	3	0	
PHY 621	Computational Physics	3	3	0	