

M.Sc. in Materials Science 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	
MATSCI 691	Graduate Seminar 1	1	1	0	
MATSCI 692	Graduate Seminar 2	1	1	0	

2. Research Requirements

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

3. Program Requirements

The aim of program requirements is to provide M.Sc. students of Materials Science program in UST with skills and knowledge essential to classify, construct, and characterize the targeted material towards a required application. Program requirements include courses of basic knowledge essential to all graduate students of MATSCI program as foundation to more advanced courses or lab works in the field of material science.

Program Requirements (18 Cr)					
Course Code	Course Title	Cr	L	P	Prerequisite
MATSCI 601	Materials Science and Technology	3	3	0	
MATSCI 602	Transition Metal and Main Group Chemistry	3	3	0	
MATSCI 603	Macromolecules	3	3	0	
MATSCI 604	Material Processing and Characterization	3	3	0	
Materials Science Electives		6	6	0	

1. Materials Science Electives

The student must select a minimum of 12 Cr from the following list					
Course Code	Course Title	Cr	L	P	Prerequisite
MATSCI 605	Energy Conversion and Storage Processes	3	3	0	
MATSCI 606	Composites	3	2	3	
MATSCI 607	Materials Modeling	3	2	3	
MATSCI 608	Materials in Nanotechnology	3	3	0	
MATSCI 609	Materials for the Environment	3	3	0	
MATSCI 610	Market Research and Product Development	3	2	3	
MATSCI 611	Catalysis	3	3	0	
MATSCI 612	Self-assembly	3	3	0	
MATSCI 613	Ceramics	3	2	3	
MATSCI 614	Alloys and Corrosion	3	2	3	
MATSCI 615	Research Tools	3	2	3	
MATSCI 616	Research Best Practice and Ethics	3	3	0	
MATSCI 705	Energy Conversion and Storage Processes	3	3	0	
MATSCI 706	Composites	3	2	3	
MATSCI 707	Materials Modeling	3	2	3	
MATSCI 708	Materials in Nanotechnology	3	3	0	
MATSCI 709	Materials for the Environment	3	3	0	
MATSCI 710	Market Research and Product Development	3	2	3	
MATSCI 711	Catalysis	3	3	0	
MATSCI 712	Self-assembly	3	3	3	
MATSCI 713	Ceramics	3	2	3	
MATSCI 714	Alloys and Corrosion	3	2	3	
MATSCI 715	Research Tools	3	2	3	
MATSCI 716	Research Best Practice and Ethics	3	3	0	
MATSCI 717	Preparation and Characterization of Organic Thin Films	3	3	0	
MATSCI 718	Process Engineering	3	3	0	
MATSCI 719	Organic Functional Material	3	3	0	
MATSCI 720	Lab-on-a-chip devices	3	3	0	
MATSCI 721	Chemical Education	3	2	3	
MATSCI 722	Selected topics in Materials Science and Technology	3	3	0	