

Ph.D. in Nanoscience Degree Requirements

A total of 60 credits hours is required for the Ph.D. degree in Nanoscience Program. Students should consult their advisor on a regular basis to ensure that the requirements for the Ph.D. directed research and the Ph.D. dissertation are fulfilled.

Directed Research Requirements	Ph.D. Dissertation Requirements	Coursework Requirements	Total (Cr)
27	15	18	60
45%	25%	30%	100%

1. Directed Research Requirements

Directed Research Requirements (27 Cr)					
Course Code	Course Title	Cr	L	P	Prerequisite
NANOSC 781	Ph.D. Directed Research 1	3	0	9	
NANOSC 782	Ph.D. Directed Research 2	3	0	9	
NANOSC 783	Ph.D. Directed Research 3	3	0	9	
NANOSC 784	Ph.D. Directed Research 4	3	0	9	
NANOSC 785	Ph.D. Directed Research 5	3	0	9	
NANOSC 786	Ph.D. Directed Research 6	3	0	9	
NANOSC 787	Ph.D. Directed Research 7	3	0	9	
NANOSC 788	Ph.D. Directed Research 8	3	0	9	
NANOSC 789	Ph.D. Directed Research 9	3	0	9	

2. Ph.D. Dissertation Requirements

Ph.D. Dissertation Requirements (15 Cr)					
Course Code	Course Title	Cr	L	P	Prerequisite
NANOSC 795	Ph.D. Dissertation 1	3	0	9	
NANOSC 796	Ph.D. Dissertation 2	3	0	9	
NANOSC 797	Ph.D. Dissertation 3	3	0	9	
NANOSC 798	Ph.D. Dissertation 4	3	0	9	
NANOSC 799	Ph.D. Dissertation 5	3	0	9	

3. Coursework Requirements

The aim of coursework requirements is to provide students in the Ph.D. program in nanoscience with special advanced knowledge essential for completion of doctoral research. PhD candidates must take at least four courses from the 700-level courses in the Course Catalog. Students must take additional two courses; these two courses may be taken from the set of 700-level courses in the Course Catalog or may be taken from 600-level courses offered in the M.Sc. program in nanoscience. Ph.D. candidates may not register for 600-level courses that they have taken during previous studies before being admitted to the Ph.D. program.

Coursework Requirements (18 Cr)					
Course Code	Course Title	Cr	L	P	Prerequisite
600-Level or 700-Level NANOSC Electives		6	6	0	
700-Level NANOSC Electives		12	12	0	

1. Nanoscience Electives

The student must select a minimum of 18 Cr from the following list At least four courses must be from the 700-level courses					
Course Code	Course Title	Cr	L	P	Prerequisite
NANOSC 605	Advanced Molecular Spectroscopy	3	3	0	
NANOSC 606 / NANOSC 706	Transition metals and main group chemistry	3	3	0	
NANOSC 607 / NANOSC 707	Nanomedicine	3	3	0	
NANOSC 608 / NANOSC 708	Nanomaterials for Biomedical Applications	3	3	0	
NANOSC 609 / NANOSC 709	Advanced Pulmonary Drug Delivery	3	3	0	
NANOSC 610 / NANOSC 710	Macromolecules	3	3	0	
NANOSC 611 / NANOSC 711	Catalysis	3	3	0	
NANOSC 612 / NANOSC 712	Assembly and Fabrication of Nanomaterials	3	3	0	
NANOSC 704	Advanced Characterization Techniques	3	3	0	
NANOSC 713	Selected topics in Nano-scale Sciences	3	3	0	