

## Ph.D. in Molecular Science and Nanotechnology

**Degree Codes:** ES PhD MSNT or ANS PhD MSNT

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### Ph.D. Curriculum

Course Category	Number	Course Name		SCH
<b>Core Courses</b>	MSNT 506	Nanofabrication by Self-Assembly (Spring)	3	9
	MSNT 521	Principles of Cell and Molecular Biology (Fall)	3	
	MSNT 505	Nanotechnology Principles (Spring)	3	
<b>Qualifying Examinations</b>	MSNT 685 <sup>1</sup>	Doctoral Qualifying Exam (Winter)	0	
	MSNT 686 <sup>2</sup>	Oral Comprehensive Exam (Fall, Winter, Spring, Summer)	0	
<b>Doctoral Seminar</b> <sup>3</sup>	MSNT 611	Dissertation Enhancement Seminar (Fall)	1	3
	MSNT 504	MSNT Seminar (Winter, Spring)	1	
	MSNT 604	MSNT Doctoral Candidate Seminar (Winter, Spring)	1	
<b>Independent Study and Special Topics</b>	MSNT 657	Doctoral Level Special Topics (taken twice)	6	12
	MSNT 650 <sup>4</sup>	Doctoral Independent Study (taken twice)	6	
<b>Electives</b> <sup>5</sup>	Select eight (24 semester hours) approved by advisory committee			24
<b>Research and Dissertation</b> <sup>6</sup>	MSNT 651	Pre-Candidacy Doctoral Research	1-9	9
	MSNT 751	Post-Candidacy Dissertation Research	1-9	9
				Total 66

<sup>1</sup> MSNT 685 will cover topics from the program's core courses (MSNT 505, MSNT 506, and MSNT 521).

<sup>2</sup> MSNT 686 is a presentation of preliminary research achievements, a defense of proposed PhD research, and a demonstration of an understanding of the principles and methods involved in the area of research. A written proposal, uploaded in a student's plan of study and approved by their committee, is required before a student may enroll in MSNT 686.

<sup>3</sup> MSNT 611 needs to be taken once, ideally in the first year of studies. MSNT 504 needs to be taken once prior to passing the qualifying exam and oral comprehensive. MSNT 604 must be taken once after admission to candidacy.

<sup>4</sup> Taken under the supervision of the faculty member. Can be a preparation for the research leading to the dissertation.

<sup>5</sup> It is highly recommended that 18 credit hours of coursework be earned in courses that are readily identifiable as belonging to a particular discipline. Teaching at the college level typically requires that the graduate transcripts show at least 18 hours in the subject area.

<sup>6</sup> Complete 9 SCH of MSNT 651 prior to MSNT 686. After successful passing MSNT 686, complete 9 SCH of MSNT 751. Registration in any quarter is for 1 to 3 semester hours or multiples thereof, up to a maximum of 9 semester hours per quarter.

\*Students are expected to have published one or more peer reviewed journal publications or conference proceedings by the time they graduate.

**Plan of Study Important Information:** When entering information in the plan of study, it is important to note that only core courses and all core courses need to be put in section 1.1, while all others are put in section 1.2 (i.e. special topics, seminar, and research courses). See <http://coes.latech.edu/grad-programs/plan-of-study-instructions.pdf> for plan of study instructions.