College of Science
Bachelor of Science in NANOSCIENCE
Major in NANOSCIENCE

For students graduating in calendar year 2022 and for student date of entry under UG catalog 2020-2021

I. Pathways to General Education (49 credit hours)

All courses used for the Pathways to General Education must be on the University's approved list.

Pathway 1f – Foundational Discourse (6 credit hours)

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Pathway 1a – Advanced Discourse (3 credit hours)

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Pathway 2 – Critical Thinking in the Humanities (6 credit hours)

_____ 3__ _____ 3__

Pathway 3 – Reasoning in the Social Sciences (6 credit hours)

_____ 3__ _____ 3__

Pathway 4 – Reasoning in the Natural Sciences (8 credit hours)

[1]PHYS 2305 Foundations of Physics* 4__ [1]PHYS 2306 Foundations of Physics* 4__

Pathway 5f – Foundational Quantitative and Computational Thinking (8 credit hours)

[1]MATH 1225 Calculus of a Single Variable* 4__ [1]MATH 1226 Calculus of a Single Variable* 4__

Pathway 5a – Advanced Quantitative and Computational Thinking (3 credit hours)

[1]MATH 2214 Introduction to Differential Equations 3__

Pathway 6a – Critique and Practice in the Arts (3 credit hours)

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Pathway 6d – Critique and Practice in Design (3 credit hours)

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Pathway 7 – Critical Analysis and Equity and Identity in the United States (3 credit hours)

_____ 3__

II. Nanoscience Degree Core Requirements (34 credit hours)

FALL#		SPRING#	
NANO 1015 Introduction to Nanoscience*	3__	[1]NANO 1016 Introduction to Nanoscience*	3__
[1]NANO 2114 Nanoscience Research Seminar*	1__	[1]NANO 2024 Quantum Physics of Nanostructures*	4__
[1]NANO 3015 Nanoscale Synthesis, Fabrication, and Characterization*	4__	[1]NANO 3016 Nanoscale Synthesis, Fabrication, and Characterization*	4__
[1]NANO 3114 Professional Dissemination of Nanoscience Research*	1__	[1]NANO 3124 Nanoscience and the Environment*	3__
[1]NANO 4324 Introduction to Nanomedicine*	3__		

NANO 4994 Undergraduate Research*^ 8__

III. Nanoscience Major Requirements (23 credit hours)

FALL#		SPRING#	
[1]CHEM 1035 General Chemistry*	3__	[1]CHEM 1036 General Chemistry*	3__
[1]CHEM 1045 General Chemistry Lab*	1__	[1]CHEM 1046 General Chemistry Lab*	1__
[1]CHEM 2535 Organic Chemistry	3__	[1]CHEM 2536 Organic Chemistry	3__
[1]CHEM 2545 Organic Chemistry Lab	1__	[1]CHEM 2546 Organic Chemistry Lab	1__
MATH 1114 Elementary Linear Algebra	2__	[1]BIOL 2124 Cell and Molecular Biology for Engineers	2__
		[1]NANO 4124 Adv. Nanomaterials and Devices*	3__

IV. Free Electives (14 credit hours)

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_____	__	_____	__
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[1]**Prerequisites**

Some courses on this checksheet have pre-/co-requisites. Students are required to double check course pre-/co-requisites and equivalents. Please see your advisor or consult the Undergraduate Course Catalog for more information.

Acceptable Substitutions

BIOL 2124: BIOL 2104 Cell & Molecular Biology OR BIOL 2134 Cell Function Differentiation OR
NEUR 3044 Cell Molecular Neuroscience
CHEM 1035/1036: CHEM 1055/1056 General Chemistry for Majors
CHEM 1045/1046: CHEM 1065/1066 General Chemistry Lab for Majors
MATH 1114: MATH 2114 Intro to Linear Algebra
NANO 2024: PHYS 3324 Modern Physics
MATH 1114, CHEM 1035-1036, CHEM 1045-1046, PHYS 2305-2306:
ISC 1105-1106, ISC 1115-1116, ISC 2105-2106, ISC 2115-2116 Integrated Science I-II and Integrated Science Lab I-II

Foreign Language Requirement

Students who did not successfully complete at least two years of a single foreign, classical, or sign language during high school must successfully complete six semester hours of a single foreign, classical, or sign language at the college level. Courses taken to meet this requirement do not count toward the hours required for graduation. Please consult the Undergraduate Catalog for details.

Satisfactory Progress Towards Degree

Upon having attempted 72 credit hours, the student will have completed NANO 1015-1016, MATH 1225-1226, CHEM 1035-1036, CHEM 1045-1046, PHYS 2305-2306.

Graduation Requirements

120 credit hours are required for graduation. These credits must include the courses required for the major (see above sections). To graduate, a student must have at least a 2.0 in-major GPA and overall GPA.

* ***In Major GPA:*** *Courses marked with * will be used for computing the "in major" GPA.*
[#] ***Fall/Spring Course Offerings:*** *Please consult with your advisor to ensure the courses are offered in the semester you intend to take them.*
[^]***Undergraduate Research:*** *All 8 credits are not taken in one semester. They are often split among different semesters.*