

BACHELOR OF SCIENCE PHYSICS



THOMAS MORE
UNIVERSITY

Approved Sample Curriculum (Even-Year Start) – 2nd Century Core

The mission of the Physics Department is to help students from any background attain insight into the principles and techniques used in physics and engineering, which allow us to understand and appreciate the beauty of the quantitative nature of our physical Universe. The Department endeavors to foster the scientific spirit and to develop the mathematical, analytical, and laboratory skills necessary to pursue graduate studies, research, or employment in physics or engineering fields through an emphasis on foundations in mechanics, electricity and magnetism, thermodynamics, and quantum mechanics.

First Year

Fall	CR	Spring	CR
FYE 150 First-Year Exploration	1	PHY 142/142L General Physics II	5
PHY 141/141L General Physics I	5	MAT 152 Calculus and Analytical Geometry II	4
MAT 151 Calculus and Analytical Geometry I	4	Communications Core	3
History Core	3	Social Science Core	3
ENG 150 Literature, Writing and Research	3		
Subtotal		Subtotal	
16		15	

Second Year

Fall	CR	Spring	CR
PHY 241/241L General Physics III	4	PHY 242 Modern Physics	3
MAT 201 Calculus and Analytical Geometry III	4	MAT 202 Differential Equations	4
MAT 320 Linear Algebra	3	CHE 113/113L General Chemistry II (<i>recommended</i>)	4
CHE 111/111L General Chemistry I (<i>recommended</i>)	4	ENG 200+ Core	3
Subtotal		Subtotal	
15		14	

Third Year

Fall	CR	Spring	CR
PHY 312 Dynamics	4	(PHYSICS Elective)	3
MAT 310 Partial Differential Equations	3	PHY 321 – Advanced Experimental Physics I	1
(PHYSICS Elective)	3	PHY 432 Electromagnetism	4
Foreign Language	3	PHY 490* Advanced Research Proposal	1
Theology Core	3	Fine Arts Core	3
		Philosophy Core #1	1
Subtotal		Subtotal	
16		13	

Fourth Year

Fall	CR	Spring	CR
(MATH Elective)	3	PHY 416 Quantum Mechanics	3
PHY 322 Advanced Experimental Physics II	1	PHY 351/351L Electronics	4
PHY 491 Advanced Research Projects in Physics	2	PHY 498 Senior Seminar	1
Philosophy Core	3	Outer Core or Free Elective	3
Theology Core #2	3	Outer Core or Free Elective	3
Outer Core or Free Elective	3	Outer Core or Free Elective	3
Subtotal		Subtotal	
15		17	

Total Credits: 121

NOTE: Students must earn a C or better (C- is insufficient) in all major and support courses required for the major to graduate.

* The results of PHY 490 form the basis of the research in PHY 491; it may be necessary to re-take (for additional credit) PHY 490 before taking PHY 491.

NOTE: If you would like a BS in Physics and a BA in Math, then a total of 150 credit hours are required. (Please see the course catalog for details.)

Last Updated: Fall 2023

BACHELOR OF SCIENCE PHYSICS



THOMAS MORE
UNIVERSITY

Approved Sample Curriculum (Odd-Year Start) – 2nd Century Core

The mission of the Physics Department is to help students from any background attain insight into the principles and techniques used in physics and engineering, which allow us to understand and appreciate the beauty of the quantitative nature of our physical Universe. The Department endeavors to foster the scientific spirit and to develop the mathematical, analytical, and laboratory skills necessary to pursue graduate studies, research, or employment in physics or engineering fields through an emphasis on foundations in mechanics, electricity and magnetism, thermodynamics, and quantum mechanics.

First Year

Fall	CR	Spring	CR
FYE 150 First-Year Exploration	1	PHY 142/142L General Physics II	5
PHY 141/141L General Physics I	5	MAT 152 Calculus and Analytical Geometry II	4
MAT 151 Calculus and Analytical Geometry I	4	Communications Core	3
History Core	3	Social Science Core	3
English Composition Core	3		
Subtotal			Subtotal

Second Year

Fall	CR	Spring	CR
PHY 241/241L General Physics III	4	PHY 242 Modern Physics	3
MAT 201 Calculus and Analytical Geometry III	4	PHY 321 Advanced Experimental Physics I	1
MAT 320 Linear Algebra	3	MAT 202 Differential Equations	4
CHE 111/111L General Chemistry I (<i>recommended</i>)	4	CHE 113/113L General Chemistry II (<i>recommended</i>)	4
		ENG 200+ Core	3
Subtotal			Subtotal

Third Year

Fall	CR	Spring	CR
PHY 312 Dynamics	4	PHY 351/351L Electronics	4
PHY 322 Advanced Experimental Physics II	1	PHY416 Quantum Mechanics	3
MAT 310 Partial Differential Equations	3	PHY 490 – Advanced Research Proposal	1
(MATH Elective)	3	Fine Arts Core	3
Foreign Language	3	Theology Core	3
		Philosophy Core #1	1
Subtotal			Subtotal

Fourth Year

Fall	CR	Spring	CR
(PHYSICS Elective)	3	(PHYSICS Elective)	3
PHY 491 Advanced Research Projects in Physics	2	PHY432 Electromagnetism	4
Philosophy Core #2	3	PHY 498 Senior Seminar	1
Theology Core	3	Outer Core or Free Elective	3
Outer Core or Free Elective	3	Outer Core or Free Elective	3
Outer Core or Free Elective	3		
Subtotal			Subtotal

Total Credits: 121

NOTE: Students must earn a C or better (C- is insufficient) in all major and support courses required for the major to graduate.

* The results of PHY 490 form the basis of the research in PHY 491; it may be necessary to re-take (for additional credit) PHY 490 before taking PHY 491.

NOTE: If you would like a BS in Physics and a BA in Math, then then a total of 150 credit hours are required. (Please see the course catalog for details.)

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