

BACHELOR OF SCIENCE PHYSICS



THOMAS MORE
UNIVERSITY

2021 – 2022 Sample Curriculum (Even-Year Start)

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	Communication	3
PHY 141/141L General Physics I	5	PHY 142/142L General Physics II	5
MAT 151 Calculus and Analytical Geometry I	4	MAT 152 Calculus and Analytical Geometry II	4
HIS 101 World Civilizations I	3	HIS 102 World Civilizations II	3
ENG 150 Literature, Writing and Research	3		
Subtotal	16	Subtotal	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	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
Fine Arts	3	English above 210	3
Subtotal	18	Subtotal	15

Third Year

Fall	CR	Spring	CR
PHY 312 Dynamics	4	(PHYSICS Elective)	3
PHY 322 Advanced Experimental Physics II	1	PHY 490* Advanced Research Proposal	1
MAT 310 Partial Differential Equations	3	PHY 432 Electromagnetism	4
(MATH Elective, Numbered \geq 231)	3	Social Science	3
Theology	3	Theology	3
Foreign Language	3	Foreign Language	3
Subtotal	17	Subtotal	17

Fourth Year

Fall	CR	Spring	CR
(PHYSICS Elective)	3	PHY 416 Quantum Mechanics	3
PHY 491 Advanced Research Projects in Physics	2	PHY 251/251L Electronics	4
Philosophy	3	PHY 498 Senior Seminar	1
Fine Arts	3	Philosophy	3
Social Science	3	THE 425 Social Issues	3
Subtotal	14	Subtotal	14

Total Credits: 126

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 18 additional hours are required. (Please see the course catalog for details.)

BACHELOR OF SCIENCE PHYSICS



THOMAS MORE
UNIVERSITY

Sample Curriculum (Odd-Year Start)

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	Communication	3
PHY 141/141L General Physics I	5	PHY 142/142L General Physics II	5
MAT 151 Calculus and Analytical Geometry I	4	MAT 152 Calculus and Analytical Geometry II	4
HIS 101 World Civilizations I	3	HIS102 World Civilizations II	3
ENG 150 Literature, Writing and Research	3		
Subtotal	16	Subtotal	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	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
Fine Arts	3	English above 210	3
Subtotal	18	Subtotal	15

Third Year

Fall	CR	Spring	CR
PHY 312 Dynamics	4	(PHYSICS Elective)	3
PHY 322 Advanced Experimental Physics II	1	PHY 490* Advanced Research Proposal	1
MAT 310 Partial Differential Equations	3	PHY 432 Electromagnetism	4
(MATH Elective, Numbered \geq 231)	3	Social Science	3
Theology	3	Theology	3
Foreign Language	3	Foreign Language	3
Subtotal	17	Subtotal	17

Fourth Year

Fall	CR	Spring	CR
(PHYSICS Elective)	3	PHY 416 Quantum Mechanics	3
PHY 491 Advanced Research Projects in Physics	2	PHY 251/251L Electronics	4
Philosophy	3	PHY 498 Senior Seminar	1
Fine Arts	3	Philosophy	3
Social Science	3	THE 425 Social Issues	3
Subtotal	14	Subtotal	14

Total Credits: 126

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 18 additional hours are required. (Please see the course catalog for details.)