

BACHELOR OF SCIENCE PHYSICS/ PRE-ENGINEERING



THOMAS MORE
UNIVERSITY

2020 – 2021 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	Social Science	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
ENG150 Literature, Writing and Research	3	Fine Arts	3
HIS 101 World Civilizations I	3	HIS 102 World Civilizations II	3
Subtotal	16	Subtotal	18

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	PHY 251/251L Electronics	4
Theology	3	MAT 202 Differential Equations	4
Foreign Language	3	Foreign Language	3
		English above 210	3
Subtotal	17	Subtotal	18

Third Year

Fall	CR	Spring	CR
PHY 312 Dynamics	4	PHY 311 Statics	3
PHY 322 Advanced Experimental Physics II	1	Fine Arts (can be 3 CR if no CHE lab)	2
MAT 310 Partial Differential Equations	3	(PHYSICS Elective*)	3
CHE 111/111L General Chemistry I (with lab)	4	CHE 113/113L General Chemistry II (with lab)	4
Social Science	3	Theology	3
Philosophy	3	Philosophy	3
Subtotal	18	Subtotal	18

Fourth Year

This year will be spent in an Engineering program at another college. Fifteen credit hours of engineering courses can be transferred back to Thomas More to complete the major requirements for the BS in Physics from Thomas More University. Please see College Catalogue for complete program.

Total Credits: 120

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

BACHELOR OF SCIENCE PHYSICS/ PRE-ENGINEERING



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	Social Science	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
ENG150 Literature, Writing and Research	3	Fine Arts	3
HIS 101 World Civilizations I	3	HIS 102 World Civilizations II	3
Subtotal	16	Subtotal	18

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	PHY 311 Statics	3
Theology	3	MAT 202 Differential Equations	4
CHE 111/111L General Chemistry I (with lab)	4	CHE 113/113L General Chemistry II (with lab)	4
		English above 210	3
Subtotal	17	Subtotal	18

Third Year

Fall	CR	Spring	CR
PHY 312 Dynamics	4	PHY 251/251L Electronics	4
PHY 322 Advanced Experimental Physics II	1	(PHYSICS Elective*)	3
MAT 310 Partial Differential Equations	3	Fine Arts	2
Foreign Language	3	Foreign Language	3
Social Science	3	Theology	3
Philosophy	3	Philosophy	3
Subtotal	18	Subtotal	18

Fourth Year

This year will be spent in an Engineering program at another college. Fifteen credit hours of engineering courses can be transferred back to Thomas More to complete the major requirements for the BS in Physics from Thomas More University. Please see College Catalogue for complete program.

Total Credits: 120

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