

BACHELOR OF ARTS

PHYSICS



THOMAS MORE
UNIVERSITY

2021– 2022 Sample Curriculum

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
LEARNING PLAN	3	MAT 202 Differential Equations	4
Foreign Language	3	Foreign Language	3
		Social Science	3
Subtotal	14	Subtotal	14

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 320 Linear Algebra	3	English above 210	3
LEARNING PLAN	3	LEARNING PLAN	3
Theology	3	Theology	3
Fine Arts	2	Fine Arts	3
Subtotal	16	Subtotal	16

Fourth Year

Fall	CR	Spring	CR
(PHYSICS Elective)	3	PHY 498 Senior Seminar	1
PHY 491 Advanced Research Projects in Physics	2	LEARNING PLAN	3
LEARNING PLAN	3	Social Science	3
NSC/NSB Science Core (no lab necessary)	3	Philosophy	3
Philosophy	3	THE 425 Social Issues	3
		Free Elective	3
Subtotal	14	Subtotal	16

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.

The LEARNING PLAN courses are determined between the student and the advisor and will depend on the post-college goals of the student.

BACHELOR OF ARTS

PHYSICS



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Sample Curriculum – prep for Data Analytics graduate program

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
Subtotal	15	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
LEARNING PLAN (Accounting)	3	MAT 202 Differential Equations	4
ENG 150 Literature, Writing and Research	3	Social Science	3
Foreign Language	3	Foreign Language	3
Subtotal	17	Subtotal	14

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
LEARNING PLAN (Information Systems)	3	MAT 320 Linear Algebra	3
Theology	3	LEARNING PLAN (Finance)	3
English above 210	3	Theology	3
Fine Arts	2	Fine Arts	3
Subtotal	16	Subtotal	16

Fourth Year

Fall	CR	Spring	CR
(PHYSICS Elective)	3	PHY 498 Senior Seminar	1
PHY 491 Advanced Research Projects in Physics	2	LEARNING PLAN (Operations Management)	3
LEARNING PLAN (Programming)	3	Social Science	3
NSC/NSB Science Core (no lab necessary)	3	Philosophy	3
Philosophy	3	THE 425 Social Issues	3
		Free Elective	3
Subtotal	14	Subtotal	16

Total Credits: 121

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