



**DEPARTMENT OF PHYSICS**  
**PHYSICS BACHELOR OF SCIENCE**  
**MATH 125 START**  
**CLASS OF 2023**



NAME: \_\_\_\_\_

TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6	TERM 7	TERM 8
GE B1+B3 CHEM 120A 5 units	CHEM 125 3 Units	PHYS 225 + Lab 4 units	PHYS 226 + Lab 4 units	PHYS 227 + Lab 4 units	PHYS 310 3 units	PHYS 330A 3 units	PHYS 330B 3 units
GE B4 MATH 125 5 units	Math 150A 4 units	MATH 150B 4 units	MATH 250A 4 units	PHYS 300 3 units	PHYS 320 3 units	PHYS 340 3 units	PHYS 455 3 units
GE A3 CNSM 101 3 units	GE A2 3 Units	GE C2 3 units	GE C2 3 units	PHYS 380 3 units	PHYS Elective 3 units	PHYS Elective 3 units	PHYS Elective PHYS 481 3 units
GE A1 3 units	GE B2 3 units	GE D1 3 units	GE D2 3 units	UD Writing Course 3 units	UD GE B5 3 units	PHYS Elective 3 units	PHYS Elective 3 units
	GE C1 3 units			UD GE C3 3 units	UD GE D4 3 units	GE D3 POSC 100 3 units	GE E 3 units
16 units	16 units	14 units	14 units	16 units	15 units	15 units	15 units

Units	Area
39	GE lower division
9	GE upper division
3	GE/CNSM required
36	Physics BS required
28	Physics BS related
15	Physics BS elective
130	Subtotal
-9	Double counted Major/GE
<b>121</b>	<b>Total Units</b>

**INSTRUCTIONS FOR COMPLETING THE PHYSICS BACHELOR OF SCIENCE**

1. Meet with your assigned faculty advisor each semester to plan and review your academic progress.
2. Visit your College of Natural Sciences and Mathematics Student Success Team in MH 488 to review GE and graduation requirements.
3. Complete GE courses in areas A1, A2, A3 and B4 with a C or better.
4. One course from GE Overlay Z can also fulfill a requirement in another GE category. Check your Titan Degree Audit for courses that appear in both categories.
5. Apply for Graduation through your Student Center at the start of Term 7.



**DEPARTMENT OF PHYSICS**  
**PHYSICS BACHELOR OF SCIENCE**  
**MATH 150A START**  
**CLASS OF 2023**



**NAME:**

TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6	TERM 7	TERM 8
GE A3 CNSM 101 3 units	PHYS 225 + Lab 4 units	PHYS 226 + Lab 4 units	PHYS 227 + Lab 4 units	PHYS 340 3 units	PHYS 455 3 units	PHYS 330A 3 units	PHYS 330B 3 units
GE B4 MATH 150A 4 units	MATH 150B 4 units	MATH 250A 4 units	PHYS 300 3 units	PHYS 380 3 units	PHYS 320 3 units	UD Writing Course 3 units	PHYS Elective 3 units
GE B1+B3 CHEM 120A 5 units	CHEM 125 3 Units	GE B2 3 units	PHYS 310 3 units	PHYS Elective 3 units	PHYS Elective 3 units	PHYS Elective 3 units	PHYS Elective PHYS 481 3 units
GE A1 3 units	GE A2 3 units	GE C3 HIST 110A 3 units	GE C1 3 units	GE C2 3 units	GE D1 3 units	GE D3 POSC 100 3 units	GE D2 3 Units
				UD GE B5 3 units	UD GE C4 3 units	UD GE D4 3 units	GE E 3 units
15 units	14 units	14 units	13 units	15 units	15 units	15 units	15 units

Units	Area
39	GE lower division
9	GE upper division
3	GE/CNSM required
36	Physics BS required
23	Physics BS related
15	Physics BS elective
4	Open elective
129	Subtotal
-9	Double counted Major/GE
<b>120</b>	<b>Total Units</b>

**INSTRUCTIONS FOR COMPLETING THE PHYSICS BACHELOR OF SCIENCE**

1. Meet with your assigned faculty advisor each semester to plan and review your academic progress.
2. Visit your College of Natural Sciences and Mathematics Student Success Team in MH 488 to review GE and graduation requirements.
3. Complete GE courses in areas A1, A2, A3 and B4 with a C or better.
4. One course from GE Overlay Z can also fulfill a requirement in another GE category. Check your Titan Degree Audit for courses that appear in both categories.
5. A minimum of 120 distinct units complete is required for graduation, regardless of double counted GEs.
6. Apply for Graduation through your Student Center at the start of Term 7.

## PHYSICS BACHELOR OF SCIENCE

The Bachelor of Science in Physics is offered for students who are passionate about understanding how things work and enjoy applying broad perspectives to solving problems.

The B.S. in Physics prepares students for a variety of careers such as academic or industrial research and engineering, through to careers that include medicine, education, finance, or public policy.

The following courses are required to complete the B.S. in Physics.

### PHYSICS REQUIRED COURSES

Complete all **eight** Lower Division courses listed below:

Course	Course Title	Units
PHYS 225 + Lab	Fundamental Physics: Mechanics + Laboratory	4
PHYS 226 + Lab	Fundamental Physics: Electricity & Magnetism + Laboratory	4
PHYS 227 + Lab	Fundamental Physics: Waves, Optics and Modern Physics + Laboratory	4
CHEM 120A	General Chemistry A	5
CHEM 125	General Chemistry B Lecture	3
MATH 150A	Calculus I	4
MATH 150B	Calculus II	4
MATH 250A	Calculus III	4

Complete all **eight** Physics Upper Division courses listed below:

Course	Course Title	Units
PHYS 300	Survey of Mathematical Physics	3
PHYS 310	Thermodynamics, Kinetic Theory and Statistical Physics	3
PHYS 320	Classical Mechanics	3
PHYS 330A	Electromagnetic Theory 1	3
PHYS 330B	Electromagnetic Theory 2	3
PHYS 340	Modern Physics	3
PHYS 380	Methods of Experimental Physics	3
PHYS 455	Introduction to Quantum Physics	3

Complete at least **14 units** of the Physics electives listed below:

Course	Course Title	Units
PHYS 301	Energy and Sustainability	3
PHYS 315	Computational Physics	3
PHYS 411	Modern Optics	3
PHYS 416	Thermal and Statistical Physics	3
PHYS 454	Introduction to the Solid State of Matter	3
PHYS 476	Atomic Physics	3
PHYS 499*	Independent Study	1 - 3

\*Instructor approval required. PHYS 499 may be repeated for additional credit

Complete **one** of the Physics Laboratory Electives listed below:

Course	Course Title	Units
PHYS 481	Experimental Physics	3

Complete **one** course listed below to satisfy the University Upper Division GE and Physics Upper Division writing requirement:

Course	Course Title	Units
ENGL 301	Advanced College Writing	3
ENGL 360	Technical Writing	3
ENGL 363	Scientific Writing	3
MATH 380	History of Mathematics	3

## GENERAL EDUCATION REQUIREMENTS

• **Area A: Core Competencies.** Complete one course in each subarea for a total of 9 units of lower division.

Subarea	Title
A1	Oral Communication
A2	Written Communication
A3	Critical Thinking

• **Area B: Scientific Inquiry and Quantitative Reasoning.** Complete one course in each subarea; the course in B3 must be associated with the course taken to satisfy B1 or B2. Area B courses must include 9 lower division and 3 upper division units.

Subarea	Title
B1	Physical Science
B2	Life Science
B3	Laboratory Experience
B4	Mathematics/Quantitative Reasoning
B5	Implications and Explorations in the Natural Sciences and Mathematics/Quantitative Reasoning (UD)

• **Area C: Arts and Humanities.** Complete one course in each subarea for a total of 9 lower division and 3 upper division units.

Subarea	Title
C1	Introduction to the Arts
C2	Introduction to the Humanities
C3	Origins of World Civilizations
C4	Explorations in the Arts or Humanities (UD)

• **Area D: Social Sciences.** Complete one course in each subarea for a total of 9 lower division and 3 upper division units.

Area	Title
D1	Introduction to the Social Sciences
D2	American History, Institutions, and Values
D3	American Government
D4	Explorations in Social Sciences (UD)

• **Area E: Lifelong Learning and Self-Development.** Complete 3 lower division units.

Area	Title
E	Lifelong Learning and Self Development

• **Overlay: Cultural Diversity.** Complete 1 course, which can also fulfill a requirement from Area C4, D1, D4 or E. (check TDA for courses that satisfy both requirements).

Overlay	Title
	Cultural Diversity