PHYSICS B.S.

All students must meet the University Requirements. (http://catalogue.uvm.edu/undergraduate/academicinfo/degreerequirements/)

All students must meet the College Requirements. (http://catalogue.uvm.edu/undergraduate/artsandsciences/#requirementstext)

MAJOR REQUIREMENTS

All courses in core and all courses in one of the listed options.

CORE:		
Choose 1 of the following sequences:		8
PHYS 051 & PHYS 152	Fundamentals of Physics I and Fundamentals of Physics II	
PHYS 031 & PHYS 125 & PHYS 022	Physics for Engineers I and Physics for Engineers II and Introductory Lab II	
PHYS 128	Waves and Quanta	4
PHYS 211	Classical Mechanics	3
PHYS 213	Electricity & Magnetism	3
PHYS 273	Quantum Mechanics I	3
PHYS 274	Applictns of Quantum Mechanics	3
MATH 021	QR: Calculus I	4
MATH 022	QR: Calculus II	4
MATH 121	QR: Calculus III	4
MATH 230	QR:Ordinary Diffrntl Equation	3
MATH 124	QR: Linear Algebra	3
or MATH 122	QR: Applied Linear Algebra	
CHEM 031	General Chemistry 1	4
One additional course in chemistry (CHEM 032 recommended)		4
CS 021	QR: Computer Programming I [1]	3
or PHYS 256	Computational Physics	
OPTIONS		
Pure Physics:		21
PHYS 199	Experimental Physics I	
PHYS 202	Experimental Physics II [1]	
PHYS 265	Thermal & Statistical Physics	
12 credits of approved physics electives		

Mechanical Engineering:		29
ME 012	Dynamics	
ME 014	Mechanics of Solids	
ME 040	Thermodynamics	
ME 042	SU: Applied Thermodynamics	
ME 101	Materials Engineering	
ME 111	System Dynamics	
ME 143	Fluid Mechanics	
CE 001	Statics	
EE 100	Electrical Engr Concepts	
Civil and Environmental Engineering:		30
CE 001	Statics	
CE 010	Geomatics	
CE 100	Mechanics of Materials	
CE 170	Structural Analysis	
CE 173	Reinforced Concrete	
ME 012	Dynamics	
ME 040	Thermodynamics	
EE 100	Electrical Engr Concepts	
Electrical Engineering (Signals and Systems):		30
EE 003	Linear Circuit Analysis I	
EE 004	Linear Circuit Analysis II	
EE 081	Linear Circuits Laboratory I	
EE 082	Linear Circuits Laboratory II	
EE 120	Electronics I	
EE 121	Electronics II	
EE 171	Signals & Systems	
EE 174	Communication Systems	
EE 275	Digital Signal Processing	
EE 295	Special Topics	
Electrical Engineering (Circuits and Devices):		30
EE 003	Linear Circuit Analysis I	
EE 004	Linear Circuit Analysis II	
EE 081	Linear Circuits Laboratory I	
EE 082	Linear Circuits Laboratory II	

EE 120	Electronics I	
EE 121	Electronics II	
EE 131	Fundamentals of Digital Design	
EE 183	Electronics Laboratory	
EE 184	Electronics Design Project	
EE 221	Digital VLSI Circuit Design	
Astrophysics:		21
PHYS 199	Experimental Physics I	
PHYS 202	Experimental Physics II [1]	
PHYS 214	Electromagnetism	
PHYS 265	Thermal & Statistical Physics	
3 credits of approved 200-level ASTR electives		
6 credits of approved science or mathematics electives		

1 PHYS 202 and CS 021 may be waived in favor of credit in undergraduate research.