

# Commonwealth University

## Engineering Physics BS Degree Checklist

Effective Fall 2023

Required ENGT, PHYS, MATH Courses (54 credits)	Credits	Grade	Semester/Year
ENGT 101 Introduction to Engineering Technology	3		
ENGT 180 Computer Aided Design and Engineering Graphics	3		
ENGT 141 Circuit Analysis	4		
ENGT 241 Electronic Instrumentation and Data Acquisition*	3		
PHYS 212 General Physics 2	4		
PHYS 310 Modern Physics	3		
PHYS 301 Statics	3		
PHYS 302 Dynamics	3		
PHYS 315 Electronics*	4		
PHYS 422 Thermodynamics	3		
PHYS 442 Math Methods	3		
PHYS 304 Nanosciences*	4		
PHYS 404 Advanced Nanosciences Lab*	3		
MATH 170 Calculus 2	4		
MATH 270 Calculus 3	4		
MATH 370 Differential Equations	3		
ENGL 270 Technical Writing	3		

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Course substitutions for the above courses marked with an asterisk* for students in the 3+2 option	Credits	Grade	Semester/Year
PHYS 316 Digital Electronics	3		
MATH 250 Discrete Math	3		
MATH, PHYS, CHEM, GEO elective	3 or 4		
GENTRANS courses from Penn State (reverse transfer)	4		

Students in the 3+2 option will complete the Engineering Physics B. S. degree by transferring credits back to Commonwealth University from Penn State University to obtain 120 credits	Credits	Grade	Semester/Year
GENTRANS courses from Penn State (reverse transfer)	16**		

\*\*Students may transfer more credits than 16 so that the total number of credits is 120.

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### General Education

Category	Credits	Course Taken (Required classes are listed)	Semester/Grade
First Year Seminar (U)	3		
Writing (W)	3	WRIT 103 Foundations in Composition	
Oral Communication (O)	3	COMM 101 Public Speaking	
History (H)	3		
Quantitative (Q)	4	MAT 160 Calculus 1	
Diversity (D)	3		
Global Perspectives (G)	3		
Diversity (D) or Global Perspectives (G) or Foreign Language (F) Course	3		
Ethical Reasoning (E)	3		
Citizenship (S) or Critical Reasoning (R)	3	ECC122 Principles of Microeconomics (R)	
Natural World (N)	4	PHYS 211 General Physics 1	
Natural World (N)	4	CHEM 121 Chemistry for the Sciences 1	
Natural World (T)	3	CMSC 115 Python Programming	
Literature (L)	3		
Arts (A) or Creativity (C)	3		
Total General Education Credits	48		

**Students need a minimum of 120 credits to graduate from Commonwealth University**