College of Science – Physics, BS **Catalog Year 2025-2026**

Computational Physics

Degree Worksheet

Mason Core Requirements			Grades	
Mason Core Foundation		**Credits**	**Earned**	**Needed**
Written Communication (lower-level)	ENGH 100 or 101 or 123	3		
Oral Communication		3		
Quantitative Reasoning	Satisfied by MATH 113	3		
Information Technology & Computing	Satisfied by PHYS 251	3		
Mason Core Exploration				
Arts		3		
Global Understanding		3		
Literature		3		
Natural Science Overview	Satisfied by PHYS 160 or 170	3		
Natural Science with Lab	Satisfied by PHYS 260/261 or PHYS 270/261	3		
Social and Behavioral Sciences		3		
Global History	HIST 125 (or HIST 394 in special cases)	3		
Mason Core Integration				
Written Communication (upper-level)	ENGH 302	3		
Writing Intensive	Satisfied by PHYS 410	4		
Mason Apex	Satisfied by PHYS 410	4		

Major Requirements Students must complete major requirements with a minimum GPA of 2.00			Grades	
Required Courses		**Credits**	**Earned**	**Needed**
PHYS 160 & PHYS 161	University Physics I & Lab	3 | 1		
PHYS 251	Intro. to Computer Techniques in Physics	3		
PHYS 260 & PHYS 261	University Physics II & Lab	3 | 1		
PHYS 262	University Physics III	3		
PHYS 301	Analytical Methods of Physics	3		
PHYS 303	Classical Mechanics	3		
PHYS 305	Electromagnetic Theory	3		
PHYS 307	Thermal Physics	3		
PHYS 311	Instrumentation	3		
PHYS 325	Intermediate Methods of Experimental Physics	3		
PHYS 402	Intro. to Quantum Mechanics and Atomic Physics	3		
PHYS 410	Computational Physics Capstone	4		
MATH 113	Analytic Geometry and Calculus I	4		
MATH 114	Analytic Geometry and Calculus II	4		
MATH 203	Linear Algebra	3		
MATH 213	Analytic Geometry and Calculus III	3		
MATH 214	Elementary Differential Equations	3		
Select 6 credits from the following: ASTR 401, CDS 302, CDS 303, MATH 446, MATH 447		6		
Select 3 credits from the following: PHYS 326, PHYS 405, PHYS 406, PHYS 408, PHYS 409		3		
Students who are not completing a second major must select 9 credits of the following. Students who are completing a second major must select 3 credits from the following:		3-9		

ASTR 210, ASTR 328, ASTR 403, PHYS 306, PHYS 412			

Degree Notes
Students must complete a total of 74 credits in the major (68 credits if completing a second major), including at least 11 credits in mathematics, with a minimum GPA of 2.00. A total of 120 credits, with 45 numbered 300 or above, is required.