



CHICAGO STATE  
UNIVERSITY

College of Arts and Science

Bachelor of Science

Catalog year 2022-2023

# PHYE

## Engineering Physics

*\*refer to the catalog at csu.edu for updates to program requirements*

Credit Hours	120 credit hours. Students starting a 120-credit hour program in the Fall must complete a minimum of 15 credit hours per semester or 30 credit hours per academic year to earn a Bachelor's degree on time in 4 years.						
Grade Point Average	2.0 GPA (only 1 D in physics courses allowed)						
Residency Rule	Complete last 30 hours at Chicago State University. No more than 66 credit hours may be transferred in from a 2-year school						
Examinations	Transfer students who transfer in general education courses that meet their general education requirements in English Composition or Mathematics with a C or better do not have to take the corresponding placement examination.						
General Education Core	Chicago State University requires a minimum of 39 credit hours in the following General Education competencies:						
	English Composition (6 credits); Oral Communication (3 credits); Mathematics (3 credits); Foreign language (3 credits);			Social Science (9 credits); Humanities (6 credits); Fine Arts (3 credits); Biological Sciences (3 credits); Physical Sciences (3 credits)			
	Students must also complete 1 embedded diversity course and 1 embedded critical thinking course. Some courses may fulfill more than one requirement. Only approved courses will satisfy Gen Ed Requirements. Transfer students with an AA or AS degree have met all General Education Requirements. General Education requirements for Mathematics (3 hr) and Natural Sciences (6 hr) are embedded in the supportive courses for the Major (see below*).						
	<b>Subject Code/ Course Number</b>	<b>Term Offered</b>	<b>Credit Hours</b>	<b>Gen Ed</b>	<b>Also Allowed</b>	<b>Pre-requisite Courses</b>	<b>Co-requisite Courses</b>
<b>SEMESTER 1</b>							
Calculus I	MATH 1410	F, S	4	Yes	Math 1415	MATH 1210 or MATH 1250	
Composition I	ENG 1270		3	Yes	ENG 1240	Placement test	
General Chemistry I	CHEM 1400		3	Yes		One-year HS Chemistry or CHEM 1300	MATH 1200 and CHEM 1410
General Chemistry I Lab	CHEM 1410		1	Yes		CHEM 1400	CHEM 1400
Physics Skills	PHYS/CHEM 1010		1			FYSE	
Foreign Language	SPAN/FREN/CHI N/AFL 1010		3	Yes	Other languages allowed; must have a sequence in one language		
<b>SEMESTER 2</b>							
Calculus II	MATH 1420	F, S	4			MATH 1410	
Composition II	ENG 1280		3	Yes	ENG 1240	ENG 1270	
General Chemistry II	CHEM 1450		3			CHEM 1400	MATH 1210, CHEM 1460
General Chemistry II Lab	CHEM 1460		1			CHEM 1450	CHEM 1450
Engineering Economy	ENGR 2400		3				
Introduction to Physics & Engineering Professions	ENGR 1100		2				

SEMESTER 3							
Calculus III	MATH 2430		4			MATH 1420	
Calculus based Physics I	PHYS 2110	F	4	Yes		MATH 1410	MATH 1410
Intro to C++	CPTR 1100		3			MATH 0990	
Oral Communication	CMAT 2030		3	Yes	ENG 2011		
Introduction to Biology	BIOL 1070	F, S	3		BIOL 1080 or BIOL 1701		

SEMESTER 4							
Differential Equations	MATH 2550		4			MATH 2430	
Calculus based Physics II	PHYS 2220	S	4			PHYS 2110	MATH 1420
Social Science Elective 1			3			Fine Arts	
Physics advisor approved elective			3		Consult advisor		
Humanities Elective			3				

SEMESTER 5							
Calculus based Physics III	PHYS 2330	F	4			PHYS 2220	
Electronics I	PHYS 2700	F	4			PHYS 2220	
Statics	ENGR 2430	F	3			PHYS 2110, MATH 2430	
Social Science Elective 2			3				
Thesis Research I	PHYS 2100		1		Consult advisor		

SEMESTER 6							
Mathematical Methods I	PHYS 3450	S	3				
Physics advisor approved elective			3		Consult advisor		
Dynamics	ENGR 2550		3			ENGR 2430, MATH 2550	
Social Science Elective 3			3				
Thermodynamics	ENGR 2330 OR PHYS 3210		3			PHYS 2330, PHYS 2700	

SEMESTER 7							
Material Science and Engineering	ENGR 2500		3			CHEM 1550	
Quantum Mechanics I	PHYS 3250 or 3255		3			PHYS 3110	
Electricity and Magnetism I	PHYS 3150 or 3155		3			PHYS 2330	
Thesis Research II	PHYS 4900		1			Consent of department	
Signals and Systems	PHYS 3610		3			PHYS 2700 MATH 2430	

SEMESTER 8							
Adv. Undergrad Lab I	PHYS 4850		4			PHYS 2330	
Electronics II	PHYS 2710		4			PHYS 2700	
Senior Thesis	PHYS 4905		3			Consent of dept	
Physics advisor approved elective			1		Consult advisor		

Notes:

- Thesis committee approval and 120 hours of research must be completed **before** taking PHYS 4905.