



**CHICAGO STATE
UNIVERSITY**

City Colleges of Chicago

Transfer Guide

**BS in Physics Engineering
Option (PHYE)**

Chicago State University has a longstanding mission to provide a diverse group of students with access to quality higher education. This access prepares students to meet their educational goals and make meaningful contributions to their communities. Chicago State University's current mission documents reaffirm this distinctive goal, underscoring the institution's dedication to social justice and leadership, and declaring a new focus on community development through entrepreneurship.

Program Overview

The Department of Chemistry, Physics, and Engineering Studies offers a Bachelor of Science degree in Physics. The general goal of the physics program is to prepare students for scientific careers in industry, government, and education, as well as for advanced study in physics or other disciplines, such as engineering, architecture, medicine, material science, or medicine and health. The physics program aids students in developing

- a broad foundation in the theory, principles, and history of physics.
- skills in analytical reasoning and problem solving.
- necessary laboratory, safety, and literature skills.
- effective oral and written communication skills, including notebook keeping, graphing, writing laboratory reports, using computers for data analysis, and conducting research presentations.
- an understanding of the impact of physics on industry, society, the environment, and an appreciation of the role and responsibilities of physicists in today's world

The Engineering Physics Option (PHYE) prepares students for Engineering careers or Engineering graduate programs.

Highlights

- High quality teaching, a family environment, faculty engagement, and support from peer mentoring programs.
- Engagement in hands-on, minds-on, STEM Research.
- Opportunities to attend, present, and communicate science at local and national conferences – CSU students have given presentations all over the world – from Chicago to Switzerland!
- Local, national, and global internship opportunities.

Advisor Contact Information

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WSC-307

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Articulation Crosswalk for BS in Physics: Physics Engineering Option (PHYE)

Chicago City Colleges Associate in Engineering Science (0100) AES			Chicago State University BS Physics Engineering Option (PHYE)		
Course #	Title	Credit Hours	Course #	Title	Credit Hours
ENG 101	Composition I	3	ENG 1270	Composition I	3
ENG 102	Composition II	3	ENG 1280	Composition II	3
Fine Arts/ Humanities	IAI Fine Arts or Humanities*	3	Fine Arts/ Humanities	IAI Fine Arts or Humanities	3
Social/Behavioral Science	IAI Social/Behavioral Science*	3	Social/ Behavioral Science	IAI Social/Behavioral Science	3
MATH 207	Calculus & Analytic Geometry I	5**	MATH 1410	Calculus I	4 (5)
CHEM 201	General Chemistry I	5**	CHEM 1400/1410	General Chemistry I Lecture and Lab	4 (5)
Required Degree Core:					
CIS 142 or ENGR 190	C++ Object Oriented Programming I or Computer Programming for Engineers	3	CPTR 1100	Introduction to C++ Programming	3
MATH 208	Calculus & Analytic Geometry II	5**	MATH 1420	Calculus II	4 (5)
MATH 209	Calculus & Analytic Geometry III	5**	MATH 2430	Calculus III	4 (5)
MATH 210	Differential Equations	3	MATH 2550	Differential Equations	4 (3)
PHYSICS 235	Engineering Physics I	5**	PHYS 2110	Physics I with Calculus	4 (5)
PHYSICS 236	Engineering Physics II	5**	PHYS 2220	Physics II with Calculus	4 (5)
Recommended Program Electives (Students may wish to substitute ENGR courses listed on the next page):					
CHEM 203	General Chemistry II	5**	CHEM 1450/ 1460	General Chemistry II Lecture and Lab	4 (5)
BIOL 115 or 121	Human Biology or Biology I	4 or 5**		IAI Biological Science	3 (4 or 5)
PHYSICS 237	Engineering Physics III	5**	PHYS 2330	Physics III with Calculus	4 (5)
ENGR 111	Engineering Success Seminar	3	ENGR 1100	Introduction to Physics and Engineering	2 (3)
Total Credit Hours Taken at CCC		65 (66)	Total Credit Hours Transferred to CSU		65 (66)

*One course must satisfy the CCC Human Diversity (HD) requirement.

**Math courses and science lab courses that equal 4 or 5 credit hours at City Colleges transfer as such to CSU.

Courses required at CSU for BS in Physics: Engineering Option (PHYE)	
CSU Courses	Credit Hours
CMAT 2030 Basic Speech Communication	3
IAI Humanities	3
IAI Fine Arts	3
IAI Social/Behavioral Science	3
IAI Social/Behavioral Science	3
Foreign Language I	3
PHYS 2700 Electronics I	3
PHYS 2710 Electronics II	3
PHYS 3150 Electricity and Magnetism	3
PHYS 3250 Quantum Mechanics I	3
PHYS 3610 Signals and Systems	3
PHYS 3000 Level Physics or Engineering Elective	3
PHYS 4160 Electricity and Magnetism II	3
PHYS 4850 Advanced Undergraduate Lab I	3
PHYS 4905 Senior Thesis	3
ENGR 2330 Engineering Thermodynamics or PHYS 3210 Thermodynamics	3
ENGR 2400 Engineering Economy	3
ENGR 2430 Statics	3
ENGR 2500 Material Science & Engineering	3
ENGR 2550 Dynamics	3
CSU Completion Credit Hours	60

CCC Transferred Credit Hours	65 (66)
CSU Completion Credit Hours	60
Total Degree Credit Hours	125 (126)