

QUANTUM INFORMATION SCIENCE AND ENGINEERING, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

Program Requirements

Requirement	Credits
Requirements for the Minor	21-22

Requirements for the Minor

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (<https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/>). In addition, at least six credits of the minor must be unique from the prescribed courses required by a student's major(s).

Code	Title	Credits
Prescribed Courses		
<i>Prescribed Courses: Require a grade of C or better</i>		
MATH 220	Matrices	2-3
PHYS 211	General Physics: Mechanics	4
PHYS 212	General Physics: Electricity and Magnetism	4
PHYS 214	General Physics: Wave Motion and Quantum Physics	2
PHYS/EE/ESC 337	Introduction to Quantum Information Science and Engineering	3
Additional Courses		
<i>Additional Courses: Require a grade of C or better</i>		
Select 6 credits from the following:		6
CMPSC 466	Introduction to Quantum Computation	
EE/CMPEN 415	Computing with Commercial Quantum Computers	
PHYS/EE/ESC 437	Physical implementation of qubits	