

COMPUTATIONAL ENGINEERING CERTIFICATE

Engineering Physics majors have the opportunity to focus their elective course work in a specific concentration area and earn a certificate if they are interested in a more focused field of study. Successful completion of an ENGP certificate requires a student to choose any four out of the seven total electives (i.e., out of the four engineering electives, one contemporary physics elective, one classical physics elective, and one broader technical elective) from within a particular concentration area.

Engineering Physics Major (<https://catalog.tulane.edu/science-engineering/physics-engineering/engineering-physics-major/>)

The allowable electives for the Computational Engineering Certificate are listed in the Requirements.

Requirements

Course ID	Title	Credits
Four Electives		
Select four courses from the list as explained in the description above:		12
ENGP 3290	Computational Materials Scienc ⁴	
PHYS 3230	Quantum Information Science & Engineering ³	
CMPS 2300	Intro to Comp Sys & Networking ¹	
CMPS 3140	Intro Artificial Intelligence ⁴	3
CMPS 3160	Introduction to Data Science ¹	3
CMPS 3240	Intro to Machine Learning ¹	3
CMPS 3280	Information Theory ¹	
CMPS 3300	Software Studio ⁴	3
CMPS 3350	Intro to Computer Graphics ⁴	
CMPS 3360	Data Visualization ¹	3
CMPS 4250	Math Found Comp Security ¹	
MUSC 4400	Music & Dsp ¹	
MUSC 4410	Music Performance System ¹	
COSC 3000	C++ Prog For Sci & Engr ⁴	
COSC 3100	Data Visualization ⁴	
COSC 3200	Large Scale Computation ⁴	
BMEN 3820	Math Analysis Bio Systms ⁴	
CENG 3230	Numr Meth For Chem Eng ⁴	
Total Credit Hours		27

¹ satisfies a Broader Technical elective

² satisfies a Classical Physics elective

³ satisfies a Contemporary Physics elective

⁴ satisfies an Engineering elective