

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 Sci & Eng 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