

The Second Major in Electrical Engineering

A second major in electrical engineering is ideal for students majoring in many areas, such as mathematics, physics, chemistry and biology. Students in the McKelvey School of Engineering as well as the other undergraduate divisions at Washington University now have the opportunity to pursue a second major in electrical engineering. Students are not allowed to add this second major to either the BS in Electrical Engineering or the BS in Applied Science (Electrical Engineering).

The requirements for a second major in electrical engineering are as follows:

Code	Title	Units
ESE 105	Introduction to Electrical and Systems Engineering	4
ESE 2180	Linear Algebra and Component Analysis	3
ESE 2190	Vector Calculus and Dynamics of Physical Systems	3
ESE 230	Introduction to Electrical and Electronic Circuits	4
ESE 232	Introduction to Electronic Circuits	3
ESE 260	Introduction to Digital Logic and Computer Design	3
ESE 326	Probability and Statistics for Engineering	3
ESE 330	Engineering Electromagnetics Principles	3
ESE 351	Signals and Systems	3
CSE 131	Introduction to Computer Science	3
Total Units		32

In addition, students must select 18 units of ESE electives from the following list: ESE 205, ESE 2971, ESE 330 through 399, ESE 400, ESE 405, ESE 407, ESE 425, ESE 429 through 499, ESE 503 through 589.

Students may petition to substitute electrical-science-oriented courses from other disciplines in Arts & Sciences (e.g., certain courses in physics or applied mathematics) for up to two of the above required courses. Within this second major in electrical engineering, areas of concentration are possible in devices and circuits, applied physics, signals and imaging, and control systems.

For more information, please contact the director of the program, Chuan Wang.