

SYSTEMS SCIENCE AND ENGINEERING, MINOR

System engineering (SSE) helps us to understand what happens when we compose many elements, each with their own behavior, and helps us understand how to design and constrain the individual elements to engineer desired behavior for the composed system. Students can pursue a SSE minor by completing six courses that includes decision making, data processing and modeling, simulation, and design of systems.

For more information: <http://www.ease.upenn.edu/current-students/undergraduates/minors.php>

SEAS Second Major or Minor Option

Students interested in declaring a second major (College students only) or minor with SEAS should check the website of the department overseeing the major/minor for the requirements. Students are encouraged to reach out to the department staff if they have any questions or would like to discuss the requirements and/or their plan of completion. Students then must submit the Declare/Update Field of Study PATH form (<https://sfs.upenn.edu/registrar/studentforms/>), which will go through multiple approval steps before the major/minor is added to the student's record.

For more information: <http://www.seas.upenn.edu/undergraduate/degrees/minors.php>

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Code	Title	Course Units
ESE 2100	Introduction to Dynamic Systems	1
ESE 2240	Signal and Information Processing	1.5
ESE 3030	Stochastic Systems Analysis and Simulation	1
ESE 3040	Introduction to Optimization	1
Electives		
Select 1 Information Systems Elective ¹		1
Select 1 Information Systems or Systems Design Elective ¹		1
Total Course Units		6.5

¹ Approved elective lists can be found on the most recent SSE worksheet.

The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2025 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.
