OVERVIEW

Become part of a community of engineering professionals exploring the frontier of modern research, pushing the boundaries in the field of systems engineering, and solving issues faced by your current employer. Begin your Ph.D. in systems engineering online with Colorado State University. Designed for senior management and top-level executives, our highly selective systems engineering Ph.D. program only accepts a handful of students each semester to maintain the integrity and quality of the student experience.

You’ll study with faculty who bring decades of experience in applying academic research to real-world situations, and are conducting cutting-edge research of their own that will help write the textbooks of tomorrow. The online program offers the advantage of synchronous or asynchronous delivery, allowing you the flexibility to study when and where it works best for your situation.

- Online while the lecture is happening live on campus
- Watching a recorded version sometime after work or on the weekend research are relevant to students’ education and development

Transforming today’s electric power system into an intelligent network capable of generating, distributing, and consuming power anywhere within the system based on clean energy sources, realtime information, and market-driven transactions is a daunting engineering task. Colorado State University’s Systems Engineering program addresses the challenges of designing and building such complex engineered systems.

Dr. Sunil Cherian
President and CEO, Spirae, Inc.

DELIVERY

Online; select courses have in-person attendance options

CREDITS

72 credits

TUITION

$995 per credit
Financial aid and military discount are available

TIME FRAME

Varies based on intensity of study and previous coursework

DEGREE AWARDED

Doctor of Philosophy in Systems Engineering

OFFERED BY

The College of Engineering

LEARN MORE

online.colostate.edu/degrees/systems-engineering-phd

Contact our Student Success Team to get started! (970) 491-5288 online.colostate.edu/contact
MINIMUM ADMISSION REQUIREMENTS

• B.S. degree from a regionally-accredited institution in engineering, mathematics, or a science discipline

• Minimum 3.0 GPA in undergraduate coursework

• Math coursework through Calculus III or equivalent, with grades of “C” or better

• A statistics course or the ability to apply statistical methods – STAT 301 may be taken to satisfy this requirement

• GRE test scores are required if your degree was conferred by an institution outside of the U.S.

COMPLETION REQUIREMENTS

• A minimum of 72 credits must be completed

• Ph.D. – 42 credits needed (applicable master’s earned with at least 30 credits)
  • 18 course credits required
  • Dissertation (24 cr.)

• Ph.D. – 72 credits needed (no applicable master level degree earned)
  • 39 course credits required
  • Dissertation (33 cr.)

• A maximum of 6 credit hours at the 400 level is permitted. The remaining credits must be at the 500 level or above. For a listing of technical electives, contact the systems engineering advisor
  sys_engr_info@engr.colostate.edu.
  Additionally, any course from the core courses list, if not taken as part of your required core credits, can be taken as technical electives.

CURRICULUM

Course delivery options allow you to study when and where it works best for you, whether that be streaming the lecture from your computer while it’s happening live on campus or watching a recorded version at a time more convenient for you. In certain semesters, select courses can also be attended in-person at our South Metro Denver location.

Core courses

Students with applicable master level degree – select 18 credits
Students without applicable master level degree – select 21 credits

• CIS 600 – Information Technology and Project Management
  OR

• CIS 670 – Advanced IT Project Management
  OR

• MECH 501 – Engineering Project Management and Program Management

• ENGR 501 – Foundations of Systems Engineering (3 cr.)

• ENGR 530 – Overview of Systems Engineering Processes (3 cr.)

• ENGR 531 – Engineering Risk Analysis (3 cr.)

• ENGR 565 – Electrical Power Engineering (3 cr.)

• ECE 566 – Energy Conversion for Electrical Power Systems (3 cr.)

• ENGR 567 – Systems Engineering Architecture – Systems Engineering Architecture (3 cr.)

• ECE 568 – Electrical Energy Generation Systems (3 cr.)

• ECE 621 – Energy Storage for Electrical Power Systems (3 cr.)

• ECE 622 – Energy Networks and Power Distribution Grids (3 cr.)

• ENGR 510 – Engineering Optimization: Methods and Applications (3 cr.)

• ENGR 520 – Engineering Decision Support/Expert Systems (3 cr.)

• MECH 513 – Simulation Modeling and Experimentation (3 cr.)

• ENGR 532 – Dynamics of Complex Engineering Systems (3 cr.)