Welcome US Air Force to Portland State University

Introducing the Systems Engineering Program
Systems Engineering Degree Path to Ph.D.

The PSU Masters of Engineering in Systems Engineering Degree Counts Toward a

- Ph.D. in Engineering & Technology Management from the Engineering & Technology Management Department or
- Ph.D. in System Science from the System Science Program
Systems Engineering at PSU Dominates

Solving Tough Problems, Resolving Conflicts, Answering Unanswered Questions, and Exploring the Unknowns
The Spotlights on PSU Systems Engineering

• The First Online Graduate Degree in Systems Engineering
• In Top 10 Most Innovative Universities in the U.S.A.
• Faculty with Real World Experience As Systems Engineers
• Faculty Who Perform Research at the Frontiers of Systems, Systems Engineering, and Engineering Systems
• Faculty Who Publish Their Research in Peer-reviewed Journals, Present Innovative Papers and Write Textbooks
• Faculty with Deep, Fundamental Research Lines that Extend to the Foundations of All Disciplines and Fields
• Institute to Analyze Deterrence Using Systems Approach
• Leadership Role in Systems of Systems
• Accredited by Northwest Commission on Colleges and Universities (NWCCU)
Systems Engineering Distance Learning Program
https://www.pdx.edu/systems-engineering/

Dr. Herman Migliore    Director
miglioh@pdx.edu

Dr. Gary Langford   Senior Professor
lgary@pdx.edu
Systems Engineering Priorities

• Systems approach to thinking critically about lifecycle issues (first concepts to end of last law suit)
• Inclusive learning processes bring each student to one-on-one discussions with the professor
• Enigmas challenge each student to reflect on their thinking process (rules of thumb and rules of dumb)
• Various learning paradigms match student preferences
• Nonjudgmental environment encourages students to be a bit wacky and try out new ideas
• Students urged to make mistakes early and often so learning can begin in earnest. No penalty, No fault learning!
PSU’s Priorities for United States Air Force

• An outstanding program in engineering for engineers and non-engineers who want to learn critical lifecycle systems thinking to solve vexing problems.
• Curriculum of excellence.
• Instructors who have experience with military systems and baffling decisions.
• Projects of importance that matter to you and our country.
• Life changing experience brought off by you to make you better at all you do.

Learning is personal – take it, own it, use it.

PSU’s Priorities for Others – The SAME!
The Master’s of Engineering, Systems Engineering Degree Courses

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You Will Learn to Discover What is Wrong and What is Required, Determine a Problem, Design and Architect a Solution, Integrate to Deliver a Product, Model the Operations, and Manage the work.
Systems Engineering Flexible Degrees

Academic Innovation and Student Success
Driven by Student’s Background, Interests, and Goals
The Systems Engineering Student

- Background in any academic field is required
- At least 3 years of professional experience is required
- Advanced mathematics (e.g., calculus) not required
- Engineering or technical background not required

We provide each student with the basics to succeed.
We want a broad mix of student backgrounds.

We offer You the Opportunity to Learn How to Think Critically Using a Lifecycle Systems Approach
Admission Requirements

- Contact Director of Systems Engineering (Dr. Migliore)
- Transcripts of Undergraduate (& Graduate) Degrees and Courses from Accredited Colleges and Universities
- Earn a Minimum 3.0 GPA or Approval of Director of Systems Engineering
- Complete Application
- Work with USAF to submit paperwork and approvals
Activity Details

• Quarter System, typically one course per quarter 4-units ea.
• Asynchronous Participation with Homework Assignments
  • Course site online from which to download recorded lectures, presentation materials, and reading materials
• Online Video Conferencing for Weekly Office Hours (2hr) with Instructor; and individual discussions by appointment
• Weekly exchange of ideas via email, telephone, text
• Work at your own place and time; participate in office hours (time determined by the students)
• Flexible delivery dates for homework and exams (to accommodate individual student schedules)
• 11 Quarters to Complete, 4 Quarters per year
Requirements to Earn a Degree in Masters of Engineering in Systems Engineering

• Completion of 45 Credit Hours of Approved Courses, which includes:
  • Earning the Systems Engineering Certificate (4 core courses)
  • Successfully Completing the 9-month Capstone Project
  • Maintaining a grade of B or Better for all Graduate Courses
  • 16 credit hours of electives tailored to AF topics-
    Possible to transfer elective courses from accredited grad certificates such as from AFIT