

Online Master of Science in Systems Engineering

Program Highlights

30 credit hours

In-state tuition: \$782/credit hour*

Out-of-state tuition: \$782/credit hour*

* Tuition is based on 2023-2024 rates and is subject to change.*

- Provided in an convenient, flexible and accessible 100% online format by UTEP's College of Engineering
- One of only a few online systems engineering master's degree programs in the nation
- Designed for engineers and other STEM professionals seeking technical and managerial skills and created to serve industry partners
- Hands-on curriculum takes into consideration the Systems Engineering Handbook of the International Council on Systems Engineering (INCOSE) and covers the full spectrum of Systems Engineering sub-disciplines
- Program culminates with a practicum and gives students an advantage in earning their Associate/Certified Systems Engineering Professional (ASEP/CSEP) certification



Gain Skills Specifically Needed by Industry Partners

Opportunities in systems engineering are available in a wide range of industries including manufacturing, aerospace, defense, healthcare, electronics, automotive, education, software, government and other sectors that have a need for people who can understand and manage complex systems. The College of Engineering created this degree to ensure that graduates had skills that industry partners like Lockheed Martin and Department of Defense contractors look for. Positions that our graduates typically hold may include:

- Analyst
- Chief systems engineer
- Mission systems engineer
- Mission systems architect/developer
- New mission developer
- Principal systems engineer
- Product architect
- Project director
- Project manager
- Subsystem engineer
- Systems architect
- Systems engineer
- Technical director



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Admissions Requirements

To qualify for admission to the online Master of Science in Systems Engineering program, you must:

- Submit a completed graduate admissions application and application fee.
- Submit official transcripts in accordance with the requirements of the Graduate School.
- Have a bachelor's or master's degree from an accredited college or university.
- Unless you already possess an accredited graduate degree, demonstrate academic achievement and potential as indicated by the results of the Graduate Record Examination (GRE).
- Write a brief statement of purpose.
- Provide letters of recommendation from individuals who can evaluate your ability to succeed in a rigorous graduate program, including one from the company sponsoring you (if appropriate).
- Other evidence of relevant personal or professional experience.

Recommendations for admission are made on the basis of the following:

- GPA in upper-division or graduate work, as appropriate.
- Professional commitment and interest as demonstrated by the personal statement and other supporting materials as available.
- Letters of recommendation.
- Leveling courses.

International applicants must also submit:

- Official TOEFL (Test of English as a Foreign Language) scores.

Curriculum

Each student is expected to have core knowledge in key areas of systems engineering. The online Master of Science in Systems Engineering requires a minimum of 30 credit hours, and can be accomplished through the Project Practicum degree. All students are required to complete the following five core courses (15 SCH) with a B average or better and with no more than one C. A Graduate Certificate in Systems Engineering option is available for students who complete these five core courses.

Core Coursework

SE 5341	Systems Engineering Fundamentals
SE 5342	Systems Engineering Management
SE 5343	Systems Requirements Analysis
SE 5344	Systems Integration, Verification & Validation
SE 5345	Systems Engineering Project Practicum

Concentration Track

SE 5346	Systems Architecture and Design
SE 5347	Systems Engineering Process
SE 5348	Systems Modeling & Simulation

Other Courses

Completion of the MSSE degree also requires 6 credit hours of graduate courses from the College of Engineering, Science or Business Administration.

Total Credits: 30

Note: Curriculum is subject to change.

