

Program Evaluation: Embedding Evaluation into Program Design and Development

(Dual-listed with COM S 507). (Cross-listed with AER E). Cr. 3. S.

Prereq: AER E 361 for AER E majors. COM S 311 for COM S majors. AER E 361 or COM S 311, or an equivalent course, plus instructor permission for other majors.

Introduction to the fundamentals of formal methods, a set of mathematically rigorous techniques for the formal specification, validation, and verification of safety- and security-critical systems. Tools, techniques, and applications of formal methods with an emphasis on real-world use-cases such as enabling autonomous operation. Build experience in writing mathematically analyzable specifications from English operational concepts for real cyberphysical systems, such as aircraft and spacecraft. Review capabilities and limitations of formal methods in the design, verification, and system health management of today's complex systems.

Reference

[The Good, the Bad, and the Data: Shane the Lone Ethnographer's Basic Guide to Qualitative Data Analysis](#)

[Clinical Instruction & Evaluation: A Teaching Resource: A Teaching Resource](#)