

UMW-VSE/Mason Pre-Master's Program Systems Engineering, MS

Systems Engineers are expert in overseeing complex projects. They are responsible for complete integration of all engineered and non-engineered components, including integration of humans, for the success of the system throughout its life cycle. They analyze needs and requirements, design, production, deployment, operation, maintenance, refinement, and retirement of systems. The MS in Systems Engineering offers seven specializations: Advanced Transportation Systems (ATS); Architecture-Based Systems Integration (ABSI); Command, Control, Communications, Computing, and Intelligence (C4I); Financial Systems Engineering (FNSE); Systems Engineering and Data Analytics (SEDA); Systems Engineering of Software-Intensive Systems (SESI); and Systems Management (SMG).

Benefits of enrolling:

The UMW-VSE/Mason Pre-Master's Program allows UMW students to earn up to nine credit hours of selected George Mason University (Mason) graduate courses for credit toward their UMW undergraduate degrees. UMW students subsequently admitted to the VSE/Mason MS in Systems Engineering program may then apply those same graduate credit hours toward their MS. Students are referred to the following program links for full information: volgenau.gmu.edu and catalog.gmu.edu/colleges-schools/engineering/.

Program Eligibility:

UMW students entering the UMW-VSE/Mason Pre-MS Program in Systems Engineering have completed 90 credit hours toward their UMW undergraduate degrees in math or a physical science with a cumulative GPA ≥ 3.30 in their major.

Getting started:

Students begin the application process through the UMW Assistant Dean of Arts and Sciences. Students are encouraged to meet with the Assistant Dean at the start of their junior year to plan their UMW curriculum for admission to the Pre-MS Program.

VSE/Mason courses:

The following UMW-VSE/Mason Pre-MS Program courses are eligible for undergraduate credit at UMW and for subsequent credit toward the VSE/Mason MS in Systems Engineering.

- OR 541 – Operations Research: Deterministic Models (3 credit hours)
 - Required UMW prerequisite: MATH 300 (grade of B or better)
- OR 542 – Operations Research: Stochastic Models (3 credit hours)
 - Required UMW prerequisite: STAT 381 (grade of B or better)
- SYST 573 – Decision and Risk Analysis (3 credit hours)
 - Required UMW prerequisite: STAT 381 (grade of B or better)

Typically graduate courses are offered with a start time of either 4:30pm or 7:20 pm

For VSE graduate programs tuition and fees, visit: <https://studentaccounts.gmu.edu/tuition-fees/>