

Graduate Program in Systems Engineering

The Virginia Tech Graduate Program in Systems Engineering was launched in 1969 by members of the faculty who are now widely recognized as pioneers in the establishment and evolution of this professional practice. Since its inception it has been offered continuously throughout the extended campus environment, as an integral component of the Virginia Commonwealth Graduate Program (CGEP). Courses originating in Blacksburg and Northern Virginia are available to students throughout the VT extended campus environment using Interactive Video Conferencing (IVC) technology.

The practice of Systems Engineering involves the application of scientific and engineering initiatives to transform an operational need into a defined system configuration through the interdisciplinary and iterative process of design, test and evaluation. Systems Engineering involves the integration of many different engineering and scientific disciplines in a total effort to plan, design, implement and provide life-cycle support for deliverables that can be characterized as complex systems and which enable enterprise performance in the customer/client operating environment.

Students enrolled in the Virginia Tech Graduate Systems Engineering program take a core of required systems engineering courses (including a capstone thesis or project); a primary and secondary concentration of courses in two different fields of science/engineering which are integrated into a system solution during the capstone course: plus an open elective in technology management or engineering/business administration.

Highlights of the VT Systems Engineering Graduate Program include:

- ◆ Master of Science in Systems Engineering Degree
- ◆ Major and minor areas of engineering concentration are selected by the student
- ◆ 10 courses / 30 credit hours of graduate study
- ◆ Thesis and Project options available
- ◆ All required courses available at most VT extended campus sites
- ◆ Consistent with recognized standards (INCOSE, Federal/State Government, Corporate, International etc.)

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