

Professional Master's in Applied Systems Engineering

Advance your career – *without interrupting it.*



Structured for your success,

our two-year program is uniquely designed for the working professional. The distinctive blended format features a mix of online courses and three on-site sessions with your cohort at Georgia Tech's Atlanta campus.

Learn more at pmase.gatech.edu/info



U.S. News & World Report ranks Georgia Tech:

- No. 7 public university in the country
- No. 4 graduate engineering college
- No. 5 undergraduate engineering college
- No. 1 industrial engineering program
- 10 graduate engineering programs ranked in the top 10

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Graduates will be proficient not only in the methods and practices of systems engineering, but they will also be aware of the upcoming research results that will shape the discipline in the future. This will make them both more capable engineers and more valuable to the agencies or corporations where they work.”

”

– Stephen E. Cross,
Executive Vice President-Research,
Georgia Institute of Technology



Further Your Career

with a Professional Master's Degree in Applied Systems Engineering from Georgia Tech



Georgia Tech's PMASE program prepares today's engineers to become tomorrow's leaders by giving them the necessary skills for success in environments where constant change and innovation are the norm. As technology grows more complex, systems engineering becomes even more essential.

Apply practical knowledge, tools, and technologies immediately at your organization

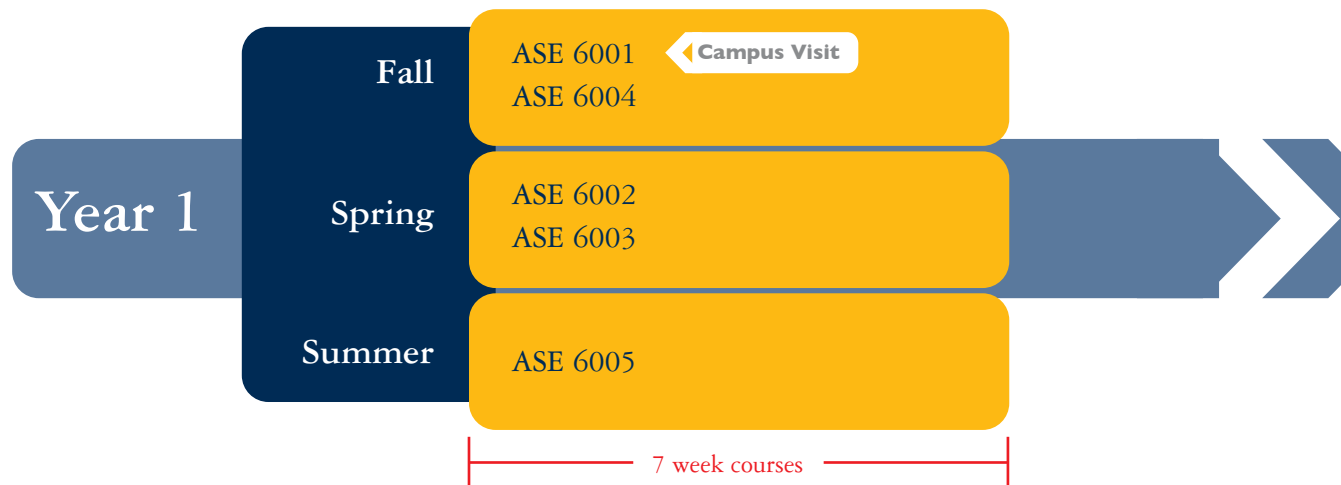
In the real world, solutions must be practical rather than theoretical. That is why PMASE utilizes hands-on experience through interactive exercises and laboratories to solve real-life problems. You will be able to quickly apply the knowledge gained through the program in your current position *and as you advance in your career.*



Curriculum

The PMASE curriculum includes six core courses and a complex systems track sequence of four courses.

Earn three semester hours for each course, for a total of 30 program hours for degree completion. The Capstone Project is the final course of the 10 course sequence. This experiential workshop takes what you have learned in the program and affords you the opportunity to apply it to a real-world systems engineering challenge. Capstone projects originate from a number of industry sources including Healthcare, the Department of Defense, and possibly your own employer.



THE SIX CORE COURSES INCLUDE:

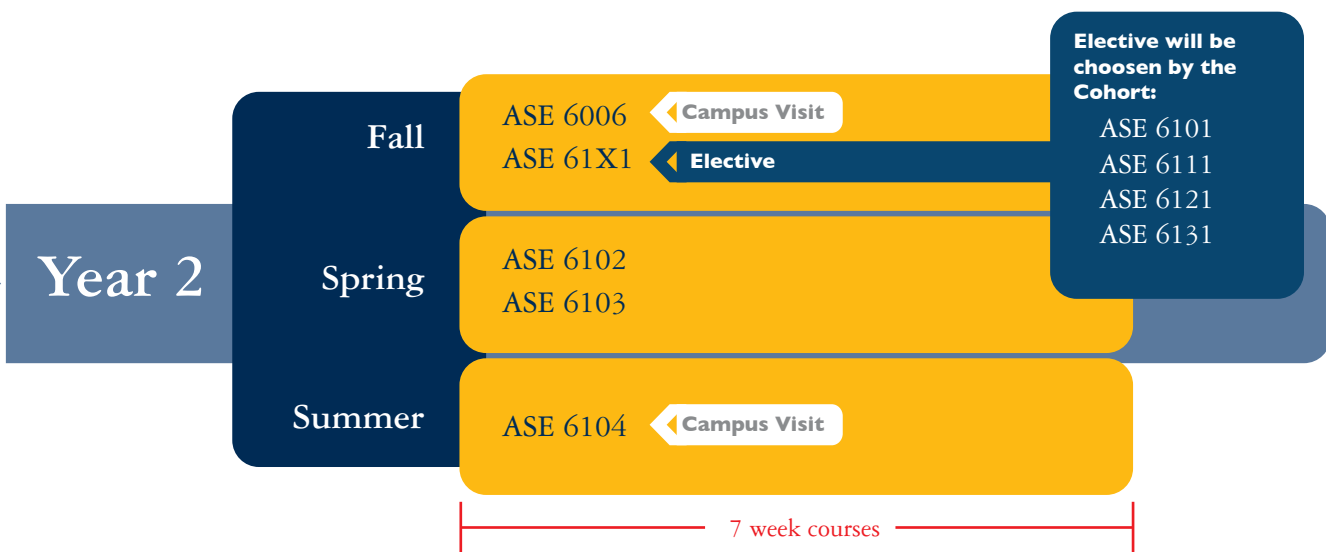
- ASE 6001 - Introduction to Systems Engineering
- ASE 6004 - Leading Engineering Teams
- ASE 6002 - Systems Design and Analysis
- ASE 6003 - Systems Modeling and Optimization
- ASE 6005 - Systems Modeling with SysML
- ASE 6006 - Systems Engineering Laboratory

COMPLEX SYSTEMS TRACK SEQUENCE:

- ASE 61X1 – Analysis and Synthesis (Elective)
- ASE 6102 – Systems of Systems and Architectures
- ASE 6103 – Lifecycle and Integration
- ASE 6104 – Complex System Capstone Project

Students develop “systems thinking” skills by focusing on:

- Underlying principles of the systems engineering process
- Systems requirements engineering
- Analysis and design
- Integration, modeling and simulation
- Verification and validation
- Systems engineering leadership and management



ASE 61X1 ELECTIVE CHOICES INCLUDE:

- ASE 6101 - Vehicle Systems Analysis and Synthesis
- ASE 6111 - Sensor Systems Analysis and Synthesis
- ASE 6121 - Information Systems Analysis and Synthesis
- ASE 6131 - Human Systems Integration Analysis and Synthesis

»» Why Georgia Tech?



A master's degree from Georgia Tech is a sound investment,

backed by our world-class faculty, cutting-edge research, a strong alumni network, and a proven track-record of high-quality adult education programs. The Institute is consistently the only technological university ranked in *U.S. News & World Report's* listing of America's top ten public universities. In addition, Georgia Tech's College of Engineering is regularly ranked in the nation's top five Engineering Undergraduate Programs. These impressive national rankings reflect the academic prestige long-associated with the Georgia Tech curriculum.

PRACTICAL, APPLICABLE KNOWLEDGE

The PMASE program focuses on the integrative nature of systems engineering. The curriculum is rooted in the engineering of systems and the development of a systems engineering mindset through "systems thinking." Students learn to view the systems engineering process as a multifaceted and multi-disciplined function within and between organizations.

WORLD-CLASS FACULTY

Georgia Tech's exceptional faculty and staff provide the diverse background needed to address the multidisciplinary aspects of the PMASE program. Highly skilled instructors from the College of Engineering (CoE) have developed methods, processes, and tools essential to this program. Seasoned Georgia Tech Research Institute (GTRI) engineers offer practical knowledge valued by non-traditional, working students. Research expenditures are among the top 10 in universities without a medical school, with FY2010 research funding topping \$615.8 million.

FLEXIBLE, HYBRID FORMAT

Students can pursue a master's degree without interrupting their career. Our flexible, hybrid format offers the convenience of distance learning without sacrificing faculty and peer interaction essential to our team-based approach to learning.

“ I really enjoyed the collaboration... it allowed me to learn from my classmates...their experiences. Most of my classmates have experience ranging from three, up to twenty years. So they bring that with them to the team, to the group. ”

– Richard Wise,
Retail Store & Finance Manager,
RJWise, Inc,
PMASE '10 Student

Structured to Help You Succeed

Designed for working professionals

The Professional Master's in Applied Systems Engineering (PMASE) program is structured to enable working professionals to learn while maintaining a full-time career. The program is rigorous, but also non-intrusive. While the majority of PMASE is online, students still benefit from real-time interaction with faculty and peers:

- Lectures are pre-recorded and made available 24-7 via the web
- Interact in real-time during scheduled web conferencing sessions
- Experience Georgia Tech in person during three campus visits



COHORT PROGRAM: Working together to achieve success

Students enrolled in the Professional Master's in Applied Systems Engineering (PMASE) program become part of a tight-knit work group called a cohort. A cohort is a group of students taking the same classes on the same schedule in pursuit of the same goal.



Is PMASE Right for Me?

Our program is designed for science and engineering professionals who want to advance their careers.

Whether you are a manager now or you want to become one, Georgia Tech's professional master's degree gives you the tools and skills to be successful.

Make no mistake--PMASE is a Georgia Tech degree, taught by Georgia Tech faculty and research scientists. PMASE is an accelerated program, so you can expect a level of academic rigor consistent with a top-ranked technology and engineering university.



“ Georgia Tech carries a very strong undercurrent of do-ers. What they turn out is a high quality product. The people that sit for commencement at Georgia Tech are very well prepared to handle challenges and meet those challenges head on.

– Nick Bollweg,
Research Scientist,
Georgia Tech Research Institute,
PMASE '09 Graduate

Is this an accredited degree?

Yes. The Professional Master's in Applied Systems Engineering degree is accredited by the Southern Association of Colleges and Schools (SACS).

Why a Professional Master's Degree in Applied Systems Engineering?

The PMASE program is specifically tailored for practicing engineers. From day one, our students are developing processes, techniques, and tools for immediate application to everyday tasks. Let us help you build the skill set to tackle the systems engineering challenges in your current work place.

In Their Own Words

Georgia Tech is the No.7 public university in the nation, according to the 2011 rankings by *U.S. News & World Report*,

and the Georgia Tech College of Engineering is consistently ranked in the nation's top five engineering schools. These high rankings reflect the academic prestige long associated with the Georgia Tech tradition of academic rigor. However, selecting a graduate program is about more than just numbers.

Students choose Georgia Tech because of our reputation for quality, flexibility in delivery, and because they want to complete their degree in two years. Don't take our word for it. Read what our students and graduates have to say:

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Georgia Tech is a great school. It's one of the best. It's one of the top engineering schools in the nation. And it's well recognized within the DOD industry, so it played a huge role in my decision to join the program.

”

– Andrew Lopez, Systems Engineer, Science & Engineering Services, Inc., PMASE '09 Graduate

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I would recommend it to anyone who has the desire to advance his or her career. I believe that employers are realizing the need to have sufficient staff that understands and can apply the systems engineering process and tools in order to produce better, more affordable systems. Having a PMASE degree can position an engineer for more of a leadership role.

”

– Richard Wise, Retail Store & Finance Manager, RJ Wise, Inc., PMASE '10 Student

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It's not like they [PMASE faculty] wrote a textbook on an experience they had 20 years ago... They can tell you what's currently happening in the world, how that's going to affect you, what you need to watch out for – and, a lot of times, you can leverage that on your existing work projects. At least I have, and it's worked out pretty well.

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– Ben Benoy, Research Scientist, Georgia Tech Research Institute, PMASE '10 Student

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I was drawn to PMASE because of the “real-world” curriculum, the blended format, and Georgia Tech's reputation for excellence. I've already been able to apply knowledge learned in class to my current projects. Since most course material is delivered online, I don't miss a beat—even when I'm traveling.

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– Scott D. King, Logistics Manager, Home Depot, PMASE '09 Graduate

Application Information



The deadline to submit applications for the fall cohort is **May 1**.

There are limited seats available in this program and you are strongly encouraged to apply early. Application packages are reviewed regularly and in the order in which they are received.

Requirements for Admission

Admission into the PMASE program is selective. Acceptance decisions are based on a student's professional experience, prior education, and the unique capabilities they can bring to their cohort. Admission into the PMASE program requires, at a minimum:

- A completed application along with application fee
- Three letters of recommendation
- An essay/statement of purpose
- An official transcript sent from each school from which you have received credit towards a degree
- Five years of professional work experience
- A bachelor's degree in Math, a hard science (chemistry, physics, etc.) or Engineering from an accredited college or university
- A satisfactory TOEFL score for international students
- Resume (including work and educational experience)

Learn more
and apply online
pmase.gatech.edu/info >>

Please note: GMAT/GRE scores are not required for acceptance into PMASE.



Learn more at pmase.gatech.edu/info >>>





Applicable to any industry

The unique, “systems-thinking” approach you learn in the Professional Master’s in Applied Systems Engineering (PMASE) program can be applied to any industry relying on complex systems including:

- Defense
- Manufacturing
- Logistics
- Consumer Packaged Goods
- Industrial Engineering
- Infrastructure



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