RUTGERS
Center for Advanced Infrastructure and Transportation

Infrastructure Asset Management Academy

Today's planners and engineers need accurate life cycle cost analysis to reduce cost & optimize limited resources into infrastructure projects that create the best value while considering resilience and climate change.

At the same, asset owners are also dealing with the problem of deferred maintenance. Recognizing the growing need for advanced workforce training in the region and beyond, the Rutgers Center for Advanced Infrastructure and Transportation (CAIT) launched its Infrastructure Asset Management Academy for Engineers and Planners (IAMA).

Through this program CAIT has been helping prepare transportation professionals with better information, new tools, and innovative best practices designed to address a changing climate, aging infrastructure, and new resilience challenges.

IAMA is a virtual, 6-course program taught by experts at Rutgers CAIT and our industry partners. Whether you are a current asset owner looking to extend the life of your infrastructure, or a student entering the transportation workforce, it is designed to provide you with the knowledge, tools, and expertise needed to make more informed asset management decisions — while also taking the next step in your career.

In the Academy, students will take a range of courses, covering everything from asset management best practices to investment planning, bridges, pavement &, track management, and resiliency planning.

To graduate, students must complete 3 core courses covering the fundamentals of asset management, asset investment planning, and resilience planning, followed by 1 of 3 supplementary courses covering specific asset types.

3 Core Courses

- Fundamentals of Asset Management Part 1
- Fundamentals 2: Asset Investment Planning
- Infrastructure Resilience Planning

3 Supplementary Courses

- Pavement Management Systems
- Bridge Management Systems
- Track Asset Management Systems

Attendees will leave the academy with a professional development certificate from Rutgers CAIT and a deeper understanding of applied asset management and best practices.

>> cait.rutgers.edu/iama

Courses

Core Curriculum

Fundamentals of Asset Management Part 1

Fundamentals Part 2: Asset Investment Planning

Infrastructure Resilience Planning

Supplementary Courses

** Attendees must complete the core curriculum as well as 1 of the 3 supplementary courses to graduate from the academy.*

Pavement Management Systems

Bridge Management Systems

Track Asset Management Systems

Fundamentals of Asset Management Part 1

Designed for the agency-level asset manager, maintenance manager and engineering consultants, this fundamentals course provides all participants with a solid base of understanding of the various elements and stages of building a modern and forward-looking asset management program.

Fundamentals 2: Asset Investment Planning

This session builds on Fundamentals Part 1 and covers current asset investment planning technologies and methods and will demonstrate how users can perform life cycle planning and trade off analysis that result in objectively derived asset and portfolio interventions that are based on quantifiable data and human applied influences.

Infrastructure Resilience Planning

For professionals responsibile for the operation, state of good repair and reliability of transportation system infrastructure assets, this course covers various resiliency planning strategies to compensate for the long term effects of global warming and in developing capital planning, as well as, the short term need for preparedness and emergency response when a hazard strikes.

Pavement Management Systems

This course shows how to develop a pavement management system to help local governments better manage pavement networks and understand road surface inventories and condition surveys. It covers how to recognize pavement distress, creating pavement condition evaluations, repair strategies, and using performance & economic analyses to develop annual treatment programs.

Bridge Management Systems

Attendees will be given an overview of what a Bridge Management System is and how a BMS can help bridge owners justify needed funds, allocate money to programs, forecast condition and performance to plan for the future, do strategic analysis, select a program of projects that achieve the largest benefit over cost, and help agencies make prioritized cost-effective decisions.

Track Asset Management Systems

Rail and transit are critical transportation assets and vital to economic success. The Track Asset Management Systems course will address track asset management knowledge gaps and provide an overview of track components, inspection and condition monitoring technologies, track safety standards, data analytics methods, and track asset management strategies and technologies.

Key Outcomes

- Learn to develop asset management program from scratch or build upon existing programs.
- Create Life Cycle Plans, Asset Performance and Risk Models, and develop and implement Capital Investment Plans.
- Better manage your critical infrastructure systems, from bridges to pavement networks and rail assets.
- Graduate the academy with a professional development certificate from Rutgers CAIT, PDH credits, and an improved understanding of Asset Management industry standards & best practices.

Why Asset Management?

"Infrastructure is the backbone of the U.S. economy
and a necessary
input to every economic output."

—ASCE, 2017

Critical transportation lifelines responsible for moving people and goods across the country, more than 40% of America's roads are now in poor or mediocre condition according to ASCE's Infrastructure Report Card. Deteriorating infrastructure not only creates public safety issues but it also has a cascading impact on the national economy, impacting business productivity, GDP, employment, personal income, and international competitiveness.

To address these challenges, significant transportation investment is needed, including educating the current and future workforce on how to utilize data across organizations, leverage proven and emerging tech to make use of limited available resources, consider life cycle costs when making project decisions, support R&D of innovative materials, and become leaders in asset management.

Located in the Northeast region, home to some of the oldest and most complex transportation systems in the world, Rutgers CAIT understands the importance of managing the roads, bridges, and pavements, that make up our infrastructure systems. Leveraging our resources and network of industry partners, CAIT is taking its asset management knowledge and sharing it with the larger transportation community through this IAMA program.

Industry Leading Speakers

Mr. Rod Lovely	Senior Research Specialist	Rutgers CAIT
Mr. Steve Gaj	AM Team Leader	FHWA
Ms. Mildred Chua-Ulger	Retired VP & CFO	MTA Bridges and Tunnels
Mr. Ashay Prabhu	VP Strategic Asset Management/Co-founder	Brightly (formerly Assetic)
Mr. Joseph Englot	Assoc. VP Infrastructure	HTNB
Mr. Gary Waters	Director of Transportation Engagement Team	ESRI
Mr. Dave Kuhn	Assistant VP	Greenman-Pedersen, Inc.
Mr Mike Johnson	State Asset Management Engineer	Caltrans
Mr. Scott Bash	Dep. Executive Director Operations, Assets & Tech	Sound Transit
Mr. Mahmoud Halfawy	Founder and CEO	Infrastructure Data Solutions

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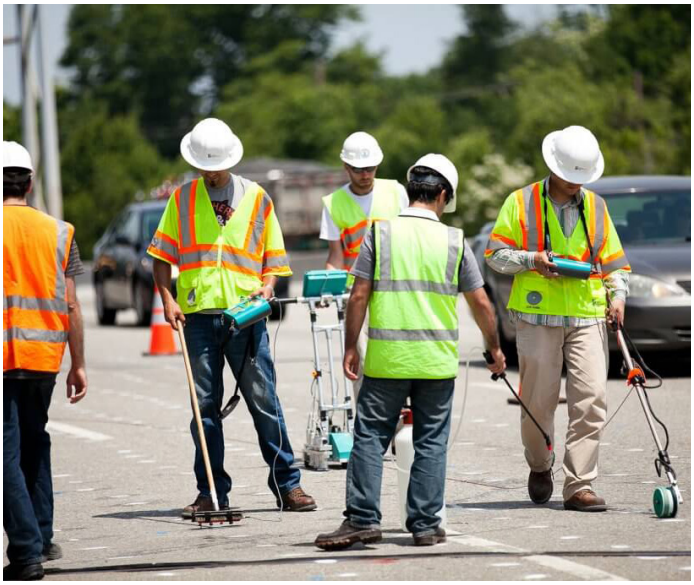

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