

DEFENSE TECHNOLOGY

Certificate Programs
and Short Courses



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Georgia Tech Professional Education (GTPE) provides flexible learning with in-person, remote, on-site, and private course options. You can choose from over 110 courses and 14 certificate programs. When you register for any of our defense technology offerings, you will get unparalleled access to Georgia Tech experts.

CERTIFICATE REQUIREMENTS

By completing a series of courses in a particular field, you can earn a Georgia Tech Defense Technology certificate. With this highly respected credential, you can increase your impact within the workplace. Certificates must be completed within six years; courses completed more than six years ago may not be applied toward a certificate.

Visit pe.gatech.edu/def for information on our courses and certificate programs.

Certificate Courses

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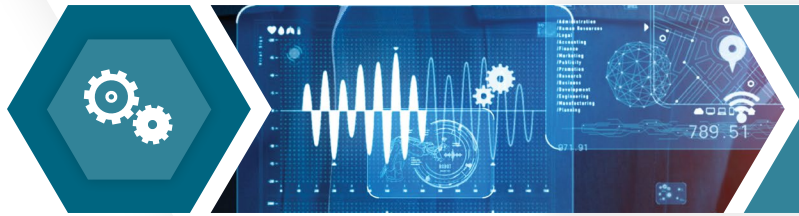


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Private Offerings

Our expert instructors will come to your location and deliver trainings on your schedule. We tailor the trainings to your organizations specific industry nuances. Private offerings do include restricted and classified courses.

The Georgia Tech Research Institute (GTRI) is the nonprofit, applied research division of Georgia Tech, and many of its field offices are willing to host private Defense Technology courses. **To request more information visit pe.gatech.edu/train-at-your-location.**



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ADVANCED PROBLEM SOLVING

The Advanced Problem Solving Certificate will teach you how to solve problems that can threaten not only productivity and profit, but also ones that can jeopardize companies and derail careers. Whether you're managing a team or just starting your career, mastering an array of strategies, managing risks, and envisioning probable outcomes before taking action can help you become more effective no matter your industry.

Course	Delivery Method	Administrator Name	Administrator Email
Applied Systems Thinking	In person / Remote	Tom McDermott	thomas.mcdermott@pe.gatech.edu
Craft of Problem Solving	In person	Jack Zentner, Ph.D.	jack.zentner@gtri.gatech.edu
Creativity Hacks - Psychology and Tools for Creative Thinking	In person	Jack Zentner, Ph.D.	jack.zentner@gtri.gatech.edu
Design of Experiments (DOE) I: Introduction to DOE	In person / Remote	Raymond Warner	raymond.warner@gtri.gatech.edu
Effect to Cause Problem Solving	In person	Jack Zentner, Ph.D.	jack.zentner@gtri.gatech.edu
Fundamentals of Modern Systems Engineering	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Fundamentals of Systems Architecting	In person / Remote	Charles Domercant	charles.domercant@gtri.gatech.edu
Leading Systems Engineering Teams	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Missile Design and System Engineering	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Modeling and Simulation for Systems Engineering	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Principles of Problem Solving	In person	Jack Zentner, Ph.D.	jack.zentner@gtri.gatech.edu



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ADVANCED SYSTEMS ENGINEERING

Whether you want to increase your proficiency of systems architecture, build your knowledge of human, optical, or cyber systems, or learn how to heighten your creativity, our Advanced Systems Engineering Certificate is designed for you.

Course	Delivery Method	Administrator Name	Administrator Email
Creativity Hacks - Psychology and Tools for Creative Thinking	In person	Jack Zentner, Ph.D.	jack.zentner@gtri.gatech.edu
Cybersecurity: A Systems Approach	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Design of Experiments (DOE) I: Introduction to DOE	In person / Remote	Raymond Warner	raymond.warner@gtri.gatech.edu
Fundamentals of Modern Systems Engineering	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Fundamentals of Cyber Systems Test and Evaluation	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Fundamentals of Systems Architecting	In person / Remote	Charles Domercant	charles.domercant@gtri.gatech.edu
Introduction to Human Systems Integration	In person	Clayton J. Hutto	cjhutto@gatech.edu
Leading Systems Engineering Teams	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Modeling and Simulation for Systems Engineering	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Optical Systems Engineering	In person	Michael Cathcart, Ph.D	mike.cathcart@pe.gatech.edu
Scientific Principles of Test and Evaluation	In person	Raymond Warner	raymond.warner@gtri.gatech.edu
SysML 101 - Model-Based Engineering Fundamentals: Understanding SysML Models	In person	Russell Peak, Ph.D.	russell.peak@gatech.edu
SysML 201 - Model-Based Engineering Fundamentals: Creating SysML Models	In person	Russell Peak, Ph.D.	russell.peak@gatech.edu
SysML 621 - Model Authoring Problems (MAP) and Intermediate Modeling Patterns	In person / Remote	Russell Peak, Ph.D.	russell.peak@gatech.edu



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ANTENNA ENGINEERING

Boost your expertise with the Antenna Engineering Certificate to obtain a wide range of mission-critical skills essential to improving products, services, and communications systems in industries such as healthcare, consumer products and services, utilities, and automobile manufacturing.

Course	Delivery Method	Administrator Name	Administrator Email
Antenna Engineering	In person / Remote	Ed Joy, Ph.D.	ed.joy@gatech.edu
Airborne AESA Radar	In person	James Skala	james.skala@gtri.gatech.edu
Basic Antenna Concepts	In person	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
EMC/EMI for Engineers and Engineering Managers	Private / Contract	John Daher	john.daher@gtri.gatech.edu
Far-Field, Anechoic Chamber, Compact and Near-Field Antenna Measurement Techniques	In person	Ed Joy, Ph.D.	ed.joy@gatech.edu
Modeling and Simulation of Antennas	In person	Jeff Kemp	jeff.kemp@gtri.gatech.edu
Modeling and Simulation of Phased-Array Antennas	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Modern Electronic and Digital Scanned Array Antennas	In person	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Near-Field Antenna Measurement Techniques	In person	Ed Joy, Ph.D.	ed.joy@gatech.edu
Radomes	In person	Ed Joy, Ph.D.	ed.joy@gatech.edu
Transmit/Receive Modules for Phased Array Radar: Components, Construction and Cost	In person	Brent Wagner	brent.wagner@gtri.gatech.edu



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CYBERSECURITY

The Cybersecurity Certificate furnishes you with both the strategic and technical knowledge to make your organization more secure amidst a growing arena of threats to operations, data, and intellectual property. Learn how to best mitigate risk, defend your network from threats originating from both outside and inside your organization, understand forensics, and use an applied approach to learning.

Course	Delivery Method	Administrator Name	Administrator Email
Applied Systems Engineering for Security Engineers	In person	Renita Folds	renita.folds@gtri.gatech.edu
Artificial Intelligence to Solve Modern Challenges	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Cyber Risk Management for Decision Makers	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Cyber Warfare/Electronic Warfare Convergence (19.5)	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Cybersecurity and Embedded Systems	Private / Contract	Renita Folds	renita.folds@gtri.gatech.edu
Cybersecurity: A Systems Approach	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Data Analytics and Methodologies	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Defensive Cyber Operations/Blue Teaming (13hrs)	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
DevSecOps and Military Applications	In person / Remote	Luke Starnes	luke.starnes@gtri.gatech.edu
Digital Forensics for Incident Response	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Digital Forensics Techniques for Weapons Systems	Private / Contract / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Electromagnetic Warfare Data Analysis	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Embedded Security Tools and Techniques: Hands-on Assessment Exercises	Private / Contract	Renita Folds	renita.folds@gtri.gatech.edu
Enterprise Security Operations for Effective Cyber Defense	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Fundamentals of Cyber Systems Test and Evaluation	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Introduction to Malware Analysis	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Introduction to Penetration Testing	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Modern NetCentric Warfare	Private / Contract	Renita Folds	renita.folds@gtri.gatech.edu
Open Source Intelligence for Emerging Threats	Private / Contract / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Protecting Your Organization from Insider Threats	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Risk Management Framework	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Secure Programming in C and C++	Private / Contract / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Secure Software Development	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Security Focused Systems Administration	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu



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ELECTRO-OPTICAL/INFRARED (EO/IR) SYSTEMS ENGINEERING CERTIFICATE

The Electro-Optical/Infrared (EO/IR) Systems Engineering Certificate will teach you the basics of EO/IR designs and trades as well as specific designs such as concepts, lasers, missiles, testing, and hardware evaluation. Upon completion of this certificate, you will be able to create and support a culture of EO/IR system trades with continuous improvement, while aligning measurable goals within your team and the organization.

Course	Delivery Method	Administrator Name	Administrator Email
Basic EO-IR Concepts	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Geometrical Optics and Image Quality	Private / Contract	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Infrared Technology and Applications	In person / Remote	Terence Haran	terence.haran@gtri.gatech.edu
Military Laser Principles and Applications	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Missile Design and Systems Engineering	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Modeling and Simulation in Electro-Optical and Infrared EO/IR Systems	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Optical Systems Engineering	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Opto-Mechanical Design and Applications	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Precision Stabilized Pointing and Tracking Systems	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Radiometry and Applications	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu



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ELECTROMAGNETIC WARFARE TECHNOLOGY

Understand how electronic warfare systems work and how they are utilized in modern military applications. With the Electronic Warfare Technology Certificate, you'll be able to immediately use the knowledge you acquire in your daily work.

Course	Delivery Method	Administrator Name	Administrator Email
Adaptive Arrays: Algorithms, Architectures and Applications	In person	George C. Brown	george.brown@gtri.gatech.edu
Advanced Radar Signals Collection and Analysis (ARSCA)	In person	Clayton Besse	clayton.besse@gtri.gatech.edu
Advanced RF Electromagnetic Warfare Principles	In person	Steve Barton	steve.barton@gtri.gatech.edu
Airborne EW System Integration	In person / Remote	Ron Beard	rod.beard@gtri.gatech.edu
Basic Concepts of RF Printed Circuits	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Basic Electromagnetic Warfare Modeling	In person	Carlos Davila, Ph.D.	carlos.davila@gtri.gatech.edu
Basic RF Electromagnetic Warfare Concepts	In person	Steve Barton	steve.barton@gtri.gatech.edu
Cyber Warfare/Electronic Warfare Convergence (19.5)	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Developing Radio Frequency (RF) Prototype Hardware	Private / Contract	Thomas Spangler	tom.spangler@gtri.gatech.edu
Digital Radio Frequency Memory (DRFM) Technology	In person	Thomas Spangler	tom.spangler@gtri.gatech.edu
Directed Infrared Countermeasures: Technology, Modeling, and Testing	In person	Charles Carstensen	charlie.carstensen@gtri.gatech.edu
Electromagnetic Materials and Measurements; RAM, Radome, and RAS	In person	Kenneth W. Allen	kenneth.allen@gtri.gatech.edu
Electromagnetic Warfare Data Analysis	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Infrared Countermeasures	In person	Charles Carstensen	charlie.carstensen@gtri.gatech.edu
Infrared/Visible Signature Suppression	In person	Keith F. Prussing	keith.prussing@gtri.gatech.edu
Introduction to Intelligence, Surveillance, Reconnaissance (ISR) Concepts, Systems, and Test Evaluation	In person	Renita Folds	renita.folds@gtri.gatech.edu
Modeling and Simulation of Phased-Array Antennas	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Modeling and Simulation of RF Circuits	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Principles of Millimeter Wave Radar Electronic Warfare	In person	Kristin Bing	kristin.bing@gtri.gatech.edu
Principles of Radar Electronic Protection	In person	Stanley Sutphin	stan.sutphin@gtri.gatech.edu
Radar Cross Section Reduction	In person	Jeffrey Bean	jeffrey.bean@gtri.gatech.edu
Radar Warning Receiver System Design and Analysis	In person	Brandon Perry	brandon.perry@gtri.gatech.edu
Radar Warning Receivers Fundamentals	In person	Brandon Perry	brandon.perry@gtri.gatech.edu
Signals Intelligence (SIGINT) Fundamentals	In person	Louis Fertig	louis.fertig@gtri.gatech.edu
Software-Defined Radio Development with GNU Radio: Theory and Application	In person	Andrew M. Henshaw	andrew.henshaw@gtri.gatech.edu
Test and Evaluation of RF Systems	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Threat Radar Systems	In person	Jeff Kemp	jeff.kemp@gtri.gatech.edu

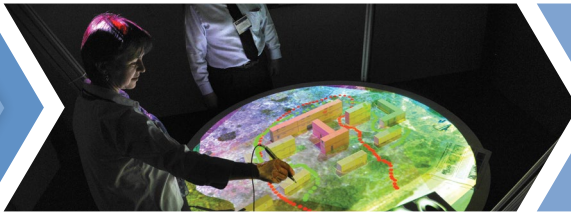


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INFRARED & ELECTRO-OPTICAL TECHNOLOGY

Discover how infrared and electro-optical systems operate and understand how to assess their strengths and limitations. With the Infrared & Electro-Optical Technology Certificate you'll learn from current experts in the field and find out about developing technologies straight from the designers.

Course	Delivery Method	Administrator Name	Administrator Email
Atmospheric LIDAR Engineering	In person	Christopher Valenta	chris.valenta@gtri.gatech.edu
Basic EO-IR Concepts	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Directed Infrared Countermeasures: Technology, Modeling, and Testing	In person	Charles Carstensen	charlie.carstensen@gtri.gatech.edu
Earth Remote Sensing Applications	Private / Contract	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Electronic Combat Flight Testing From a Systems Engineering Perspective	In person / Remote	Rod Beard	rod.beard@gtri.gatech.edu
Fundamentals of Earth Remote Sensing (18 hrs)	Private / Contract	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Fundamentals of Lidar Systems	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Hyperspectral and Multispectral Sensing	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Infrared Countermeasures	In person	Charles Carstensen	charlie.carstensen@gtri.gatech.edu
Infrared Technology and Application	In person / Remote	Terence Haran	terence.haran@gtri.gatech.edu
Infrared/Visible Signature Suppression	In person	Keith F. Prussing	keith.prussing@gtri.gatech.edu
Introduction to Intelligence, Surveillance, Reconnaissance (ISR) Concepts, Systems, and Test Evaluation	In person	Renita Folds	renita.folds@gtri.gatech.edu
Introduction to Laser Radars	Private / Contract	Christopher Valenta	chris.valenta@gtri.gatech.edu
Military Laser Principles and Applications	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Missile Design and System Engineering	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Modeling and Simulation in Electro-Optical and Infrared EO/IR Systems	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Optical Systems Engineering	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu



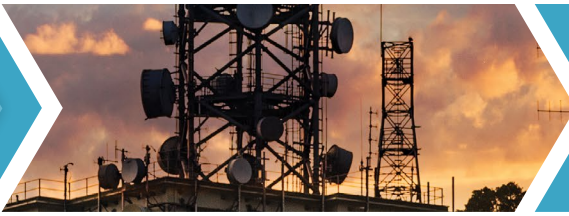
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MODELING & SIMULATIONS

No matter your field, the Modeling & Simulation Certificate allows you to develop in-depth expertise in an essential and rapidly changing arena. Whether you're involved in planning and deploying complex technology, or leading large teams through an array of intricate scenarios, the certificate will give you the skills to understand and use these tools in your daily work and throughout your career.

Course	Delivery Method	Administrator Name	Administrator Email
Basic Electromagnetic Warfare Modeling	In person	Carlos Davila, Ph.D.	carlos.davila@gtri.gatech.edu
Clutter Phenomenology, Modeling, and Synthesis	Private / Contract	Greg Showman	greg.showman@gtri.gatech.edu
Defensive Cyber Operations/Blue Teaming (13hrs)	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Design of Experiments (DOE) I: Introduction to DOE	In person / Remote	Raymond Warner	raymond.warner@gtri.gatech.edu
Directed Infrared Countermeasures: Technology, Modeling, and Testing	In person	Charles Carstensen	charlie.carstensen@gtri.gatech.edu
Distributed Simulation Fundamentals	Private / Contract	Renita Folds	renita.folds@gtri.gatech.edu
Enterprise Security Operations for Effective Cyber Defense	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Guidance, Navigation and Control: Theory and Applications	In person	Brian Stevens, Ph.D.	brian.stevens@gtri.gatech.edu
Leading Systems Engineering Teams	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Modeling and Simulation for Systems Engineering	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Modeling and Simulation in Electro-Optical and Infrared EO/IR Systems	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Modeling and Simulation of Antennas	In person	Jeff Kemp	jeff.kemp@gtri.gatech.edu
Modeling and Simulation of Phased-Array Antennas	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Modeling and Simulation of Radar Systems	In person	Carlos Davila, Ph.D.	carlos.davila@gtri.gatech.edu
Modeling and Simulation of RF Circuits	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Principles of Problem Solving	In person	Jack Zentner, Ph.D.	jack.zentner@gtri.gatech.edu
Scientific Principles of Test and Evaluation	In person	Raymond Warner	raymond.warner@gtri.gatech.edu
Software-Defined Radio Development with GNU Radio: Theory and Application	In person	Andrew M. Henshaw	andrew.henshaw@gtri.gatech.edu
SysML 101 - Model-Based Engineering Fundamentals: Understanding SysML Models	In person / Remote	Russell Peak, Ph.D.	russell.peak@gatech.edu
SysML 101/201 BLS - Model-Based Engineering Fundamentals: Understanding and Creating SysML Models	In person / Remote	Russell Peak, Ph.D.	russell.peak@gatech.edu
SysML 621 - Model Authoring Problems (MAP) and Intermediate Modeling Patterns	In person / Remote	Russell Peak, Ph.D.	russell.peak@gatech.edu
Threat Radar Systems	In person	Jeff Kemp	jeff.kemp@gtri.gatech.edu

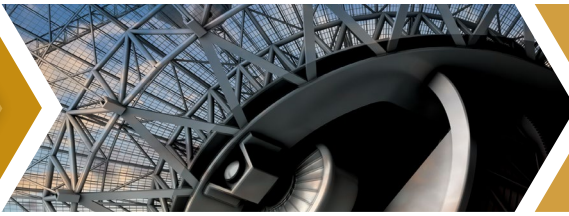


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PHASED ARRAY ANTENNA ENGINEERING

In the Phased Array Antenna Engineering Certificate program, you'll learn how the different types of phased arrays compare and how to determine which is best for your needs. For several decades, phased array antennas were found on only the most mission critical Department of Defense radar platforms. More recently these complex and costly antenna systems have proven their value in communications and electronic warfare systems, and they are making headway into other low-cost application areas. Current efforts in cost and complexity reduction are leading to adoption of phased arrays in a rapidly growing variety of consumer goods, including automotive radar and future 5G high data rate communications.

Course	Delivery Method	Administrator Name	Administrator Email
Adaptive Arrays: Algorithms, Architectures and Applications	In person	George C. Brown	george.brown@gtri.gatech.edu
Airborne AESA Radar	In person	James Skala	james.skala@gtri.gatech.edu
Antenna Engineering	In person	Ed Joy, Ph.D.	ed.joy@gatech.edu
Basic Antenna Concepts	In person / Remote	Ed Joy, Ph.D.	ed.joy@gatech.edu
Basic Concepts of RF Printed Circuits	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Modeling and Simulation of Phased-Array Antennas	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Modern Electronic and Digital Scanned Array Antennas	In person	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Near-Field Antenna Measurement Techniques	In person	Ed Joy, Ph.D.	ed.joy@gatech.edu
Phased Array Radar Systems	In person	Tracy Wallace	tracy.wallace@gtri.gatech.edu
Space-Time Adaptive Processing: Application to Radar	In person	William Melvin	bill.melvin@gtri.gatech.edu
Transmit/Receive Modules for Phased Array Radar: Components, Construction and Cost	In person	Brent Wagner	brent.wagner@gtri.gatech.edu



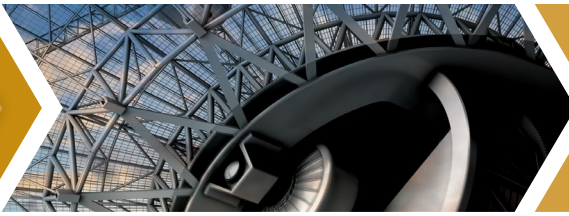
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RADAR SIGNAL PROCESSING & TECHNIQUES

Our Radar Signal Processing & Techniques Certificate will deepen your understanding of this field from the basic methods and algorithms found at the core of modern systems to the advanced techniques underlying a spectrum of radar technology. Whether your radar interests lie in defense, imaging, automotive, weather, electronic warfare, or other applications, you'll learn from instructors at the forefront of radar research.

Course	Delivery Method	Administrator Name	Administrator Email
Adaptive Arrays: Algorithms, Architectures and Applications	In person	George C. Brown	george.brown@gtri.gatech.edu
Advanced RF Electromagnetic Warfare Principles	In person	Steve Barton	steve.barton@gtri.gatech.edu
Basic Radar Concepts	In person	Bill Holm, Ph.D.	bill.holm@pe.gatech.edu
Clutter Phenomenology, Modeling, and Synthesis	Private / Contract	Greg Showman	greg.showman@gtri.gatech.edu
Digital Radio Frequency Memory (DRFM) Technology	In person	Thomas Spangler	tom.spangler@gtri.gatech.edu
Fundamentals of Radar Signal Processing	In person / remote	Byron Keel, Ph.D.	byron.keel@gtri.gatech.edu
Fundamentals of Synthetic Aperture Radar Signal Processing	In person	Greg Showman	greg.showman@gtri.gatech.edu
Modern Electronic and Digital Scanned Array Antennas	In person	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Principles of Modern Radar	In person	Bill Holm, Ph.D.	bill.holm@pe.gatech.edu
Principles of Pulse-Doppler Radar	In person	Aram Partizian	aram.partizian@gtri.gatech.edu
Principles of Radar Electronic Protection	In person	Stanley Sutphin	stan.sutphin@gtri.gatech.edu
Radar Performance: Principles and Limitations	In person	Thomas Spangler	tom.spangler@gtri.gatech.edu
Radar Waveforms: Properties, Analysis, Design and Application	In person	Byron Keel, Ph.D.	byron.keel@gtri.gatech.edu
Signal Processing Refresher	Private / Contract	William Blair, Ph.D.	dale.blair@gtri.gatech.edu
Signals Intelligence (SIGINT) Fundamentals	In person / Remote	Louis Fertig	louis.fertig@gtri.gatech.edu
Space-Based Radar	In person	Kristin Bing	kristin.bing@gtri.gatech.edu
Space-Time Adaptive Processing: Application to Radar	In person	William Melvin	bill.melvin@gtri.gatech.edu
Synthetic Aperture Radar Image Formation Processing	In person	Christopher Barnes, Ph.D.	chris.barnes@gatech.edu
Target Tracking Architectures, Algorithms and Techniques	Private / Contract	William Blair, Ph.D.	dale.blair@gtri.gatech.edu
Target Tracking Concepts	Private / Contract	William Blair, Ph.D.	dale.blair@gtri.gatech.edu
Target Tracking in Sensor Systems	In person	William Blair, Ph.D.	dale.blair@gtri.gatech.edu



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RADAR SYSTEMS

Master the ins and outs of a wide array of radar systems, including use cases, radar principles, and applications. Completing the Radar Systems Certificate will teach you how to understand the concepts behind the design of various systems as well as their limitations and advantages. Plus you'll learn about the latest developments in radar technology and design.

Course	Delivery Method	Administrator Name	Administrator Email
Advanced Radar Signals Collection and Analysis (ARSCA)	In person	TBA	mike.cathcart@pe.gatech.edu
Airborne AESA Radar	In person	James Skala	james.skala@gtri.gatech.edu
Basic Antenna Concepts	In person	Ed Joy, Ph.D.	ed.joy@gatech.edu
Basic Concepts of RF Printed Circuits	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Basic Radar Concepts	In person	Bill Holm, Ph.D.	bill.holm@pe.gatech.edu
Basic RF Electromagnetic Warfare Concepts	In person	Steve Barton	steve.barton@gtri.gatech.edu
Developing Radio Frequency (RF) Prototype Hardware	Private / Contract	Thomas Spangler	tom.spangler@gtri.gatech.edu
Electromagnetic Warfare Data Analysis	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Fundamentals of Radar Signal Processing	In person / Remote	Bryon Keel, Ph.D.	byron.keel@gtri.gatech.edu
Fundamentals of Synthetic Aperture Radar Signal Processing	In person	Greg Showman	greg.showman@gtri.gatech.edu
Modeling and Simulation of Phased-Array Antennas	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Modeling and Simulation of Radar Systems	In person	Carlos Davila, Ph.D.	carlos.davila@gtri.gatech.edu
Modeling and Simulation of RF Circuits	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Modern Electronic and Digital Scanned Array Antennas	In person	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Phased Array Radar Systems	In person / Remote	Tracy Wallace	tracy.wallace@gtri.gatech.edu
Principles of Millimeter Wave Radar Electronic Warfare	In person	Kristin Bing	kristin.bing@gtri.gatech.edu
Principles of Modern Radar	In person	Bill Holm, Ph.D.	bill.holm@pe.gatech.edu
Principles of Pulse-Doppler Radar	In person	Aram Partizian	aram.partizian@gtri.gatech.edu
Principles of Radar Electronic Protection	In person	Stanley Sutphin	stan.sutphin@gtri.gatech.edu
Radar Performance: Principles and Limitations	In person	Thomas Spangler	tom.spangler@gtri.gatech.edu
Radar Software Development	In person / Remote	Mark McCans	mark.mccans@gtri.gatech.edu
Radar Systems Engineering	In person / Remote	Dana Fitzgerald, Ph.D.	dana.fitzgerald@gtri.gatech.edu
Radar Waveforms: Properties, Analysis, Design and Application	In person	Byron Keel, Ph.D.	byron.keel@gtri.gatech.edu
Space-Based Radar	In person	Kristin Bing	kristin.bing@gtri.gatech.edu
Test and Evaluation of RF Systems	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu
Threat Radar Systems	In person	Jeff Kemp	jeff.kemp@gtri.gatech.edu
Transmit/Receive Modules for Phased Array Radar: Components, Construction and Cost	In person	Brent Wagner	brent.wagner@gtri.gatech.edu



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Advanced Radar Signals Collection and Analysis	In person	TBA	mike.cathcart@pe.gatech.edu
Basic EO-IR Concepts	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Chemical, Biological and Explosive Detection: Overview of Point and Standoff Sensing Technologies	Private / Contract	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Electromagnetic Warfare Data Analysis	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Geometrical Optics and Image Quality	Private / Contract	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Hyperspectral and Multispectral Sensing	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Missile Design and System Engineering	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Modeling and Simulation in Electro-Optical and Infrared EO/IR Systems	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Multi-Sensor Data Fusion	In person / Remote	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Opto-Mechanical Design and Applications	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Passive Acoustic Sensing Systems Engineering	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Precision Stabilized Pointing and Tracking Systems	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Signals Intelligence (SIGINT) Fundamentals	In person	Louis Fertig	louis.fertig@gtri.gatech.edu
Why is Data Fusion Hard	Private / Contract	Phil West, Ph.D.	phil.west@gtri.gatech.edu

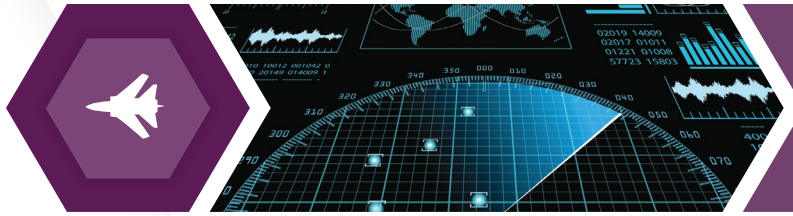


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Course	Delivery Method	Administrator Name	Administrator Email
An Acquirer's and Supplier's Guide to Success Using Systems Engineering	In person	Clement Smartt, Ph.D.	clement.smartt@gtri.gatech.edu
Applied Systems Engineering for Security Engineers	In person	Renita Folds	renita.folds@gtri.gatech.edu
Applied Systems Thinking	In person / Remote	Tom McDermott	tom.mcdermott@gtri.gatech.edu
Craft of Problem Solving	In person	Jack Zentner, Ph.D.	jack.zentner@gtri.gatech.edu
Cybersecurity: A Systems Approach	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Design of Experiments (DOE) I: Introduction to DOE	In person	Raymond Warner	raymond.warner@gtri.gatech.edu
Fundamental of Modern Systems Engineering	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Fundamentals of Systems Architecting	In person / Remote	Charles Domercant	charles.domercant@gtri.gatech.edu
Fundamentals of Modern Systems Engineering for Atmospheric Research	Private / Contract	Renita Folds	renita.folds@gtri.gatech.edu
Introduction to Human Systems Integration	In person	Clayton J. Hutto	cjhutto@gatech.edu
Leading Systems Engineering Teams	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Missile Design and System Engineering	In person	Michael Cathcart, Ph.D.	mike.cathcart@pe.gatech.edu
Modeling and Simulation for Systems Engineering	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Principles of Problem Solving	In person	Jack Zentner, Ph.D.	jack.zentner@gtri.gatech.edu
SysML 101 - Model-Based Engineering Fundamentals: Understanding SysML Models	In person / Remote	Russell Peak, Ph.D.	russell.peak@gatech.edu
SysML 101/201 BLS - Model-Based Engineering Fundamentals: Understanding and Creating SysML Models	In person / Remote	Russell Peak, Ph.D.	russell.peak@gatech.edu
SysML 201 - Model-Based Engineering Fundamentals: Creating SysML Models	In person / Remote	Russell Peak, Ph.D.	russell.peak@gatech.edu
SysML 621 - Model Authoring Problems (MAP) and Intermediate Modeling Patterns	In person / Remote	Russell Peak, Ph.D.	russell.peak@gatech.edu
Systems Engineering Spectrally Intense Systems	In person	Renita Folds	renita.folds@gtri.gatech.edu



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Cybersecurity: A Systems Approach	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Design of Experiments (DOE) I: Introduction to DOE	In person / Remote	Raymond Warner	raymond.warner@gtri.gatech.edu
Design of Experiments (DOE) II: Applied DOE for Test and Evaluation	In person	Raymond Warner	raymond.warner@gtri.gatech.edu
Directed Infrared Countermeasures: Technology, Modeling, and Testing	In person	Charles Carstensen	charlie.carstensen@gtri.gatech.edu
Electromagnetic Materials and Measurements: RAM, Radome, and RAS	In person / Remote	Kenneth W. Allen	kenneth.allen@gtri.gatech.edu
Electronic Combat Flight Testing From a Systems Engineering Perspective	In person	Rod Beard	rod.beard@gtri.gatech.edu
Fundamentals of Cyber Systems Test and Evaluation	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Fundamentals of Flight Test and Evaluation	In person / Remote	Rod Beard	rod.beard@gtri.gatech.edu
Introduction to Intelligence, Surveillance, Reconnaissance (ISR) Concepts, Systems, and Test Evaluations	In person	Renita Folds	renita.folds@gtri.gatech.edu
Introduction to Penetration Testing	In person / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Modern NetCentric Warfare	Private / Contract / Remote	Renita Folds	renita.folds@gtri.gatech.edu
Near-Field Antenna Measurement Techniques	In person	Ed Joy, Ph.D	ed.joy@gatech.edu
Scientific Principles of Test and Evaluation	In person	Raymond Warner	raymond.warner@gtri.gatech.edu
Test and Evaluation of RF Systems	In person / Remote	Glenn Hopkins	glenn.hopkins@gtri.gatech.edu



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ADDITIONAL COURSES

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Course	Delivery Method	Administrator Name	Administrator Email
High Speed Digital Design	In person / Remote	Timothy Brothers	timothy.brothers@gtri.gatech.edu
Introduction to MIL-STD-1553	In person	Bryon Coker, Jr.	byron.coker@gtri.gatech.edu
Introduction to Model-Based Systems Engineering	In person	Charles Domercant	charles.domercant@gtri.gatech.edu
Introduction to RFID Systems	In person	Christopher R. Valenta	chris.valenta@gtri.gatech.edu
Modeling Style, Use and Management	In person	Richard Wise	richard.wise@gtri.gatech.edu
Open Systems Architecting	In person / Remote	Charles Domercant	charles.domercant@gtri.gatech.edu
OSA Application to Defense Systems	In person	Lee Riddle	lee.riddle@gtri.gatech.edu
OSA Application to Platforms and Space Problems	In person	Lee Riddle	lee.riddle@gtri.gatech.edu
The Science of Soldering	In person	Jack Zetner, Ph.D.	jack.zetner@gtri.gatech.edu
Understanding the U.S. Combat Missions and Aviators	In person	Rod Beard	rod.beard@gtri.gatech.edu

NON-RESTRICTED COURSES

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