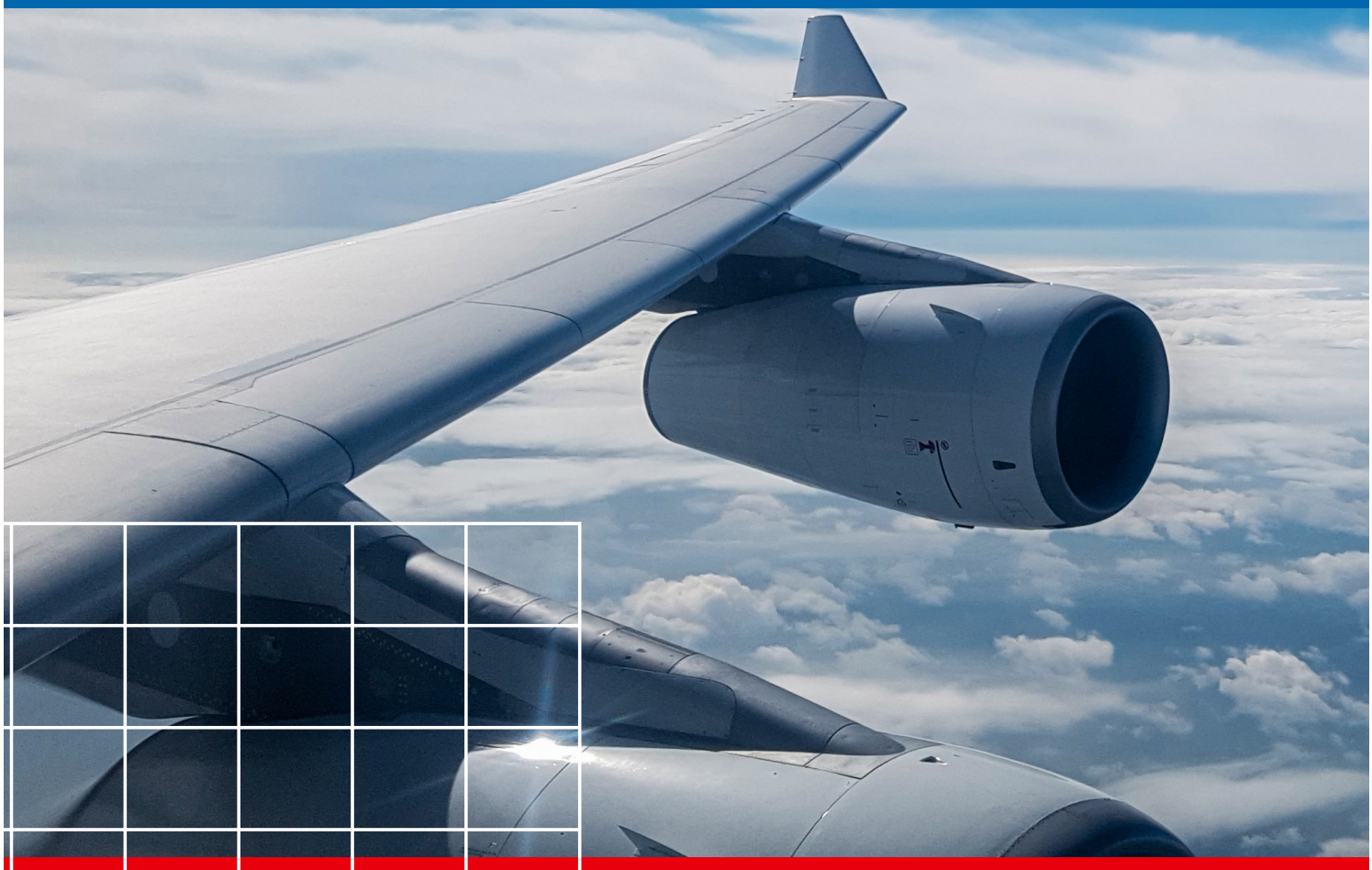
AEROSPACE

SHORT COURSES

Chart Your Course



2026 Catalog

JAYHAWK EXTENDED LEARNING

CONTENTS

DISCOUNTS

U.S. Federal Employee Discount

All courses are available to U.S. federal employees at 10% off the registration fee. To receive the federal employee discount, you must enter the code fgvt116 on the registration form or in the online checkout process.

Canada Department of National Defence Discount

All courses are available to Canada DND employees at 10% off the registration fee. Please contact the DND Procurement Authority (DAP 2-3) for details. Please note you cannot register using our online system when requesting this discount.

TEACH WITH US!

KU Aerospace Short Courses is on the lookout for new instructors to bring exciting new courses to our program. We pride ourselves on the quality of our educational content and are continuously looking to offer the most current and in-demand content for our students.

Topics of interest:

- Cybersecurity
- Urban Air Mobility
- Propulsion Power
- Certification and Compliance
- Rotorcraft
- Electronics
- Fluid Dynamics
- Unmanned Air Vehicles
- Autonomous Air Systems
- AI in Aerospace

To learn more, scan the QR code or contact us at professionalprograms@ku.edu. We look forward to hearing from you!

NEW! PROGRAM UPDATES

New way to learn! Jayhawk Aero-Access

We've been working hard this year to add new courses to our catalog to give you even more options to choose from to enhance your training experience.

New!

- Aircraft Electrification: Architectures, Technologies, and Components
- Aircraft Structures Flight Testing
- Hydrogen-based Aircraft and Airports: Concepts, Technologies, and Configurations
- Safety Management Systems
- Urban Air Mobility System Development and Operations

Newly Updated Course Content

- Airplane Preliminary Design
- Operational Test and Evaluation: Customer-Focused Testing

Have an idea for a course? Interested in teaching for us? Scan the QR code here.

JAYHAWK AERO-ACCESS: GRADUATE-LEVEL LEARNING, NO STRINGS ATTACHED

Experience a University of Kansas master's level aerospace engineering course without the commitment of a formal degree program. Through our new semester-long, non-credit format, you can learn directly from KU's expert faculty alongside our graduate students.

Key Features:

- **Hybrid Format**
  Attend live classes on the KU campus or join virtually from anywhere in the world.
- **Flexible Access**
  All sessions are recorded, allowing you to learn on your schedule, day or night.
- **Practical Application**
  Engage with course projects and receive direct feedback from KU aerospace engineering professors.
- **Knowledge Checks**
  Opt to take course exams to gauge your understanding without the pressure of grades.
- **Open Admission**
  No formal university application or admission is required. This is the perfect option for working professionals seeking to deepen their expertise or individuals considering a future master's degree.

See our available courses on page 8.

PROJECT AND INDUSTRIAL ENGINEERING

These project and technology management classes are all available online. These self-paced (not live) classes will fit anywhere in your busy schedule. Learn at your own pace, complete at your convenience.

IN-PERSON, ONLINE AND SELF-PACED OPTIONS

Lean Six Sigma Green Belt Certification

This face-to-face and online five-day program prepares new Green Belts to lead projects and contribute to improving services and manufacturing. It is delivered at the KU Edwards Campus and online.

Warehouse and Distribution Center Layout

Learn to reduce operating costs by improving warehouse processes and inventory control by optimizing layout, methods selection, space, and material handling.

Planning Lean Layouts with SLP

System Layout Planning (SLP) is recognized throughout the world as the most organized way to lay out a facility for efficient operation. This course will prepare you to lead layout projects using SLP and to achieve remarkable results in record time.

Reliability Engineering, Maintenance Management, and Planning & Scheduling

Learn from experts in the field to help build a world class manufacturing/distribution facility. Create a culture of continuous improvement with results-driven practices.

Visit jayhawkglobal.ku.edu/industrial-engineering for additional classes.

ONLINE DEGREE PROGRAM

MASTER'S IN AEROSPACE ENGINEERING

The M.S. and M.E. in aerospace engineering are specifically designed with working professionals in mind. Coursework is available asynchronously (available at any time), and you decide which live lectures to attend. For the M.S. program, you can choose a course of study based on a final thesis option or a project option. Your graduate program advisor can tell you more.

Classes have various weekly deadlines to frame your interaction with the course content, instructors, and classmates. While real-time scheduled lecture interaction with students and faculty is the preferred method of instruction, you have the flexibility to work on your own schedule while maintaining weekly deadlines and check-ins to ensure progress through the course requirements. A typical timeline for degree completion is two years, depending on the number of credit hours taken per semester.

Your graduate program advisor assists with personalized help, educational planning, and one-on-one advising. If you haven't already, get in touch with your graduate program advisor to learn more about online learning with the KU community.

For more curriculum, admissions, and tuition information, catalog.ku.edu.

ADMISSIONS

Application Deadline

- Summer — April 1.
- Fall — April 1.
- Spring – Dec. 1.

CONTACT

Aerospace Engineering
Graduate Program Advisor
785-864-2960
aerohawk@ku.edu

OPEN ENROLLMENT COURSE LOCATIONS

Our public courses are held in four key locations across the United States. We offer up to 15 different short courses, available for anyone to sign up, with the opportunity to network with hundreds of your peers across the globe. Visit each program's website listed below for details on the course venue, accommodation options, course descriptions, registration information, and other relevant information.

SEATTLE, WASHINGTON

DoubleTree by Hilton Seattle Airport Southcenter

April 13 - 17, 2026

jayhawkglobal.ku.edu/aero-seattle

SAN DIEGO, CALIFORNIA

San Diego Marriott Mission Valley

Sept. 14 - 18, 2026

jayhawkglobal.ku.edu/aero-sandiego

ORLANDO, FLORIDA

Renaissance Orlando Resort

Nov. 2 - 6, 2026

jayhawkglobal.ku.edu/aero-orlando

KANSAS CITY, KANSAS

BEST Conference Center, KU Edwards Campus

May 18 - 22, 2026

jayhawkglobal.ku.edu/aero-kc

Lodging

A limited number of rooms will be available at the course venue or nearby hotel for attendees to book lodging at a discounted rate. For rate information and booking instructions, visit the program's website.

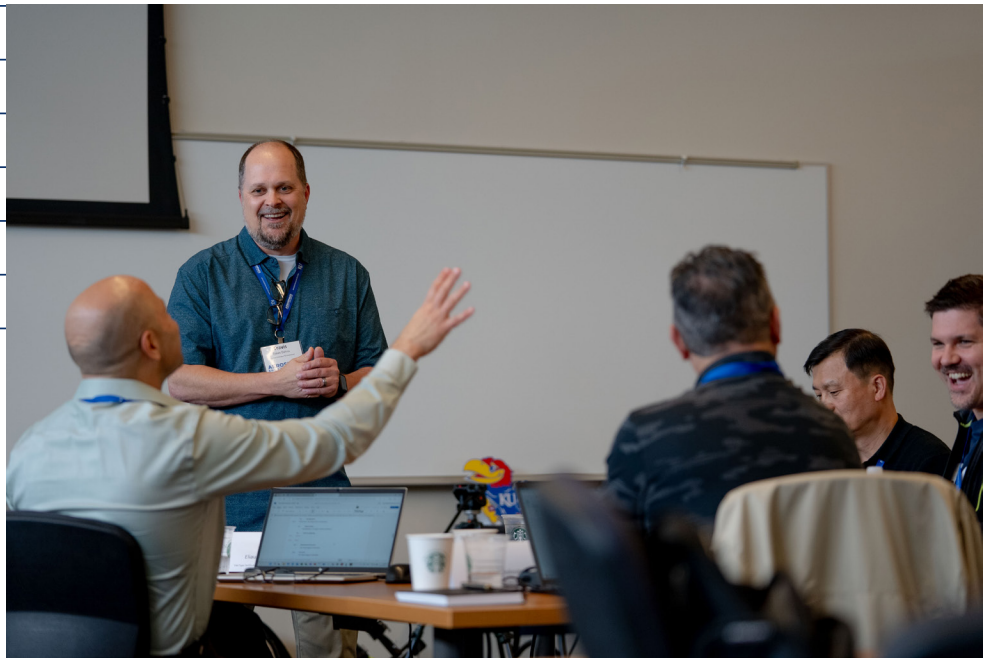
International travelers

Are you planning to attend one of our courses in the United States but are not a U.S. citizen? Please visit travel.state.gov for visa and travel information.

COURSE REGISTRATION FEES

CLASS LENGTH	IN-PERSON COURSE	ONLINE COURSE
3-day class	$1,995/$2,095*	$1,795/$1,895*
4-day class	$2,295/$2,495*	$1,895/$2,095*
5-day class	$2,595/ $2,795*	$2,195/$2,395*

* Save up to **$200** on the course registration fee when you register and pay at least 45 days in advance for in-person courses, and seven or more days in advance for online courses.



Instructor Travis Dahna fields a question during his FAA Type Certification Process class in Kansas City.

2026 PUBLIC COURSES BY DATE AND LOCATION

Seattle, WA / April 13-17, 2026

Hilton DoubleTree Suites—Seattle Southcenter / jayhawkglobal.ku.edu/aero-seattle

- Aircraft Structures: Analysis and Design
- Aircraft Icing: Meteorology, Protective Systems, Instrumentation and Certification
- Airplane Flight Dynamics
- Avionics Test and Evaluation Fundamentals
- DO-178C: Airborne Software Principles and Practices
- Electromagnetic Effects Aircraft Level Testing and FAA Requirements
- Introduction to FAA Airworthiness Approval Requirements
- Principles of Aeroelasticity
- System Safety Assessment for Commercial Aircraft Certification

April 13 - 15, 2026
$1995 (early registration)
$2095 (regular registration)

April 13 - 16, 2026
$2295 (early registration)
$2495 (regular registration)

April 13 - 17, 2026
$2595 (early registration)
$2795 (regular registration)

Kansas City, KS / May 18 - 22, 2026

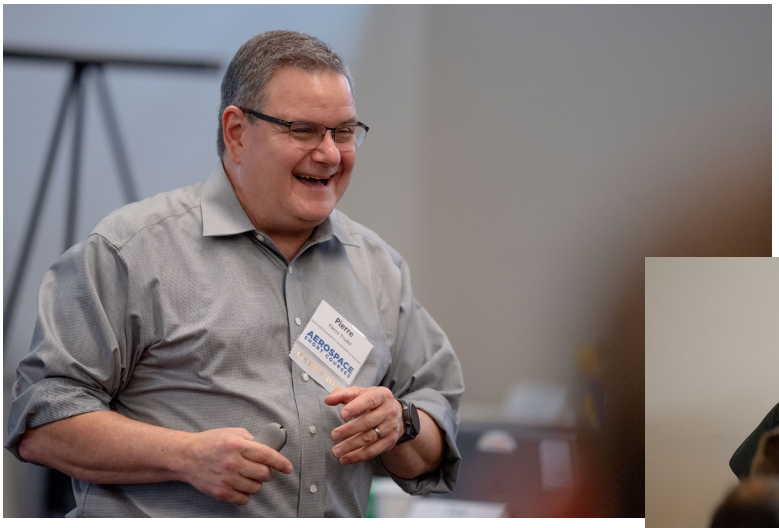
BEST Conference Center / jayhawkglobal.ku.edu/aero-kc

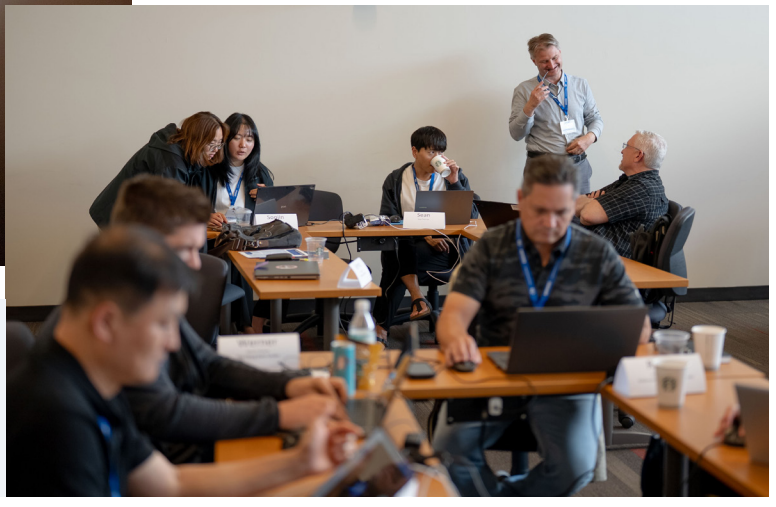
- Aircraft Electrification: Architectures, Technologies and Components
- Conceptual Design of Unmanned Aircraft Systems
- Electrical Wiring Interconnection System (EWIS) and FAA Requirements
- FAA Type Certification Process
- Fundamentals of V/STOL Rotorcraft
- Introduction to RTCA DO-160 Qualification: Purpose, Testing and Design Considerations

May 18 - 20 2026
$1995 (early registration)
$2095 (regular registration)

May 18 - 21, 2026
$2295 (early registration)
$2495 (regular registration)

May 18 - 22, 2026
$2595 (early registration)
$2795 (regular registration)





Above: Instructor Pierre Trudel laughs during his System Safety Assessment for Commercial Aircraft Certification course.

Right: Instructor Gernot Konrad laughs with other participants in Travis Dahna's FAA Type Certification Process class in Kansas City.

2026 PUBLIC COURSES BY DATE AND LOCATION

San Diego, CA / Sept. 14 - 18, 2026

San Diego Marriott Mission Valley / jayhawkglobal.ku.edu/aero-sandiego

- Advanced Topics in System Safety for Commercial Certification
- Cabin Safety and Crashworthiness of Aircraft Cabin Interiors
- Flight Test Principles and Practices
- Flight Testing Unmanned Aircraft Systems - Unique Challenges
- High Intensity Radiated Fields (HIRF) Certification and Compliance
- Hydrogen-based Aircraft and Airports: Concepts, Technologies, and Configurations
- Introduction to Electromagnetic Effects (EME) and Aircraft Engineering Requirements
- Introduction to FAA Airworthiness Approval Requirements
- Principles of Aerospace Engineering
- Stress Analysis for Aerospace Structures

Sept. 14 - 16, 2026
$1995 (early registration)
$2095 (regular registration)

Sept. 14 - 17, 2026
$2295 (early registration)
$2495 (regular registration)

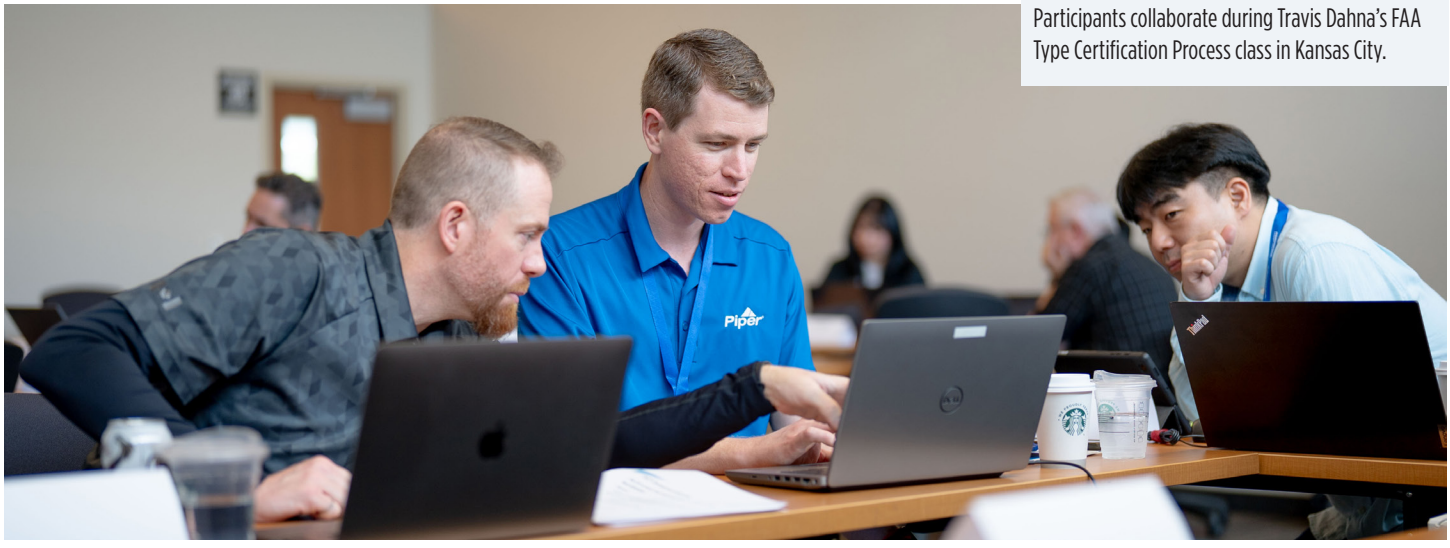
Sept. 14 - 18, 2026
$2595 (early registration)
$2795 (regular registration)

Orlando, FL / Nov. 2 - 6, 2026

Renaissance Orlando Resort / jayhawkglobal.ku.edu/aero-orlando

- Aircraft Structures Flight Testing
- Aircraft Structural Loads: Criteria, Analysis, and Validation
- Airplane Preliminary Design
- Electrical Wiring Interconnection System (EWIS) and FAA Requirements
- Fundamental Avionics
- Human Factors Engineering for Civil Flight Deck Design and Certification
- Introduction to Fuel Tank Safety and Ignition Prevention: SAE ARP6205
- System Safety Assessment for Commercial Aircraft Certification

Nov. 2 - 6, 2026
$2595 (early registration)
$2795 (regular registration)



Participants collaborate during Travis Dahna's FAA Type Certification Process class in Kansas City.

CERTIFICATES OF SPECIALIZATION

Enhance Your Knowledge—Advance Your Career

Certificates of Specialization are for those who desire concentrated study in a specific area of interest. Achieving a Certificate of Specialization demonstrates to employers, coworkers and the aerospace industry that you are qualified, competent and current in your field. It distinguishes you as a professional who is committed to your career and strives to be the best. Earn a Certificate of Specialization by completing four courses within one of the following nine specializations.

AEROSPACE COMPLIANCE (AC)

Advanced Topics in System Safety for Commercial Certification
Aircraft Icing: Meteorology, Protective Systems, Instrumentation and Certification
Aircraft Lightning: Requirements, Component Testing, Aircraft Testing and Certification
Aircraft Structural Loads: Criteria, Analysis and Validation
DO-254: Airborne Complex Hardware Principles and Practices
DO-178C: Airborne Software Principles and Practices
DO-297: Integrated Modular Avionics
Electrical Wiring Interconnection System (EWIS) and FAA Requirements
Electrical Wiring Interconnection System (EWIS) Safety Assessment 25.1709
Electromagnetic Effects Aircraft Level Testing and FAA Requirements
FAA Type Certification Plan Development
FAA Type Certification Process
Human Factors Engineering for Civil Flight Deck Design and Certification
High Intensity Radiated Fields (HIRF) Certification and Compliance
Introduction to FAA Airworthiness Approval
Introduction to Fuel Tank Safety and Ignition Prevention: Design, Certification and Compliance
Introduction to RTCA DO-160 Qualification: Purpose, Testing and Design Considerations
MIL-STD Qualification: Purpose, Testing and Design Considerations
System Safety Assessment for Commercial Aircraft Certification

AIRCRAFT STRUCTURES (AS)

Aircraft Structural Loads: Criteria, Analysis and Validation
Aircraft Structures: Analysis and Design
Aircraft Structures Flight Testing
Cabin Safety and Crashworthiness of Aircraft Interiors
Dynamics for Aerospace Structures
Stress Analysis for Aerospace Structures
Structural Composites

AIRCRAFT DESIGN (AD)

Aerodynamic Design Improvements: High-Lift and Cruise
Aerodynamic Design of Commercial Airplanes
Aerodynamic Design of Military Aircraft
Aircraft Electrification: Architectures, Technologies, and Components
Aircraft Propulsion Systems: Principles and Practices
Aircraft Structural Loads: Criteria, Analysis and Validation
Aircraft Structures: Analysis and Design
Airplane Flight Dynamics
Airplane Preliminary Design
Conceptual Design of Unmanned Aircraft Systems
Dynamics for Aerospace Structures
Flight Control and Hydraulic Systems
Fundamentals of V/STOL Rotorcraft
Future Propulsion Systems and Energy Sources in Sustainable Aviation
Hydrogen-based Aircraft and Airports: Concepts, Technologies, and Configurations
Principles of Aeroelasticity
Principles of Aerospace Engineering
Propulsion Systems for UAVs and General Aviation Aircraft
Stress Analysis for Aerospace Structures

AIRCRAFT MAINTENANCE AND SAFETY (AMS)

Advanced Topics in System Safety for Commercial Certification
Aircraft Icing: Meteorology, Protective Systems, Instrumentation and Certification
Application of Human Factors Engineering to the Life Cycle Management of Aeronautical Products and Systems
Cabin Safety and Crashworthiness of Aircraft Interiors
Electrical Wiring Interconnection System (EWIS) and FAA Requirements
Electrical Wiring Interconnection System (EWIS) Safety Assessment 25.1709
Electromagnetic Effects Aircraft Level Testing and FAA Requirements
High Intensity Radiated Fields (HIRF) Certification and Compliance
Introduction to Electromagnetic Effects (EME) and Aircraft Engineering Requirements
Introduction to Fuel Tank Safety and Ignition Prevention: Design, Certification and Compliance
Introduction to Fuel Tank Safety and Ignition Prevention: SAE ARP6205
Safety Management Systems
System Safety Assessment for Commercial Aircraft Certification

AVIONICS AND AVIONIC COMPONENTS (AAC)

Advanced Avionics
Advanced Topics in System Safety for Commercial Certification
Aircraft Avionics Test and Evaluation Fundamentals
Aircraft Lightning: Requirements, Component Testing, Aircraft Testing and Certification
DO-254: Airborne Complex Hardware Principles and Practices
DO-178C: Airborne Software Principles and Practices
DO-297: Integrated Modular Avionics
Electrical Wiring Interconnection System (EWIS) and FAA Requirements
Electrical Wiring Interconnection System (EWIS) Safety Assessment 25.1709
Electromagnetic Effects Aircraft Level Testing and FAA Requirements
Fundamental Avionics
Human Factors Engineering for Civil Flight Deck Design and Certification
High Intensity Radiated Fields (HIRF) Certification and Compliance
Introduction to Electromagnetic Effects (EME) and Aircraft Engineering Requirements
Introduction to RTCA DO-160 Qualification: Purpose, Testing and Design Consideration
MIL-STD Qualification: Purpose, Testing and Design Considerations
System Safety Assessment for Commercial Aircraft Certification
Unmanned Aircraft System Software Airworthiness

ELECTROMAGNETIC EFFECTS (EME)

Aircraft Lightning: Requirements, Component Testing, Aircraft Testing and Certification
Electrical Wiring Interconnection System (EWIS) and FAA Requirements
Electromagnetic Effects Aircraft Level Testing and FAA Requirements
High Intensity Radiated Fields (HIRF) Certification and Compliance
Introduction to Electromagnetic Effects (EME) and Aircraft Engineering Requirements
Introduction to Fuel Tank Safety and Ignition Prevention: Design, Certification and Compliance
Introduction to Fuel Tank Safety and Ignition Prevention: SAE ARP6205
Introduction to RTCA DO-160 Qualification: Purpose, Testing and Design Consideration

ELECTRICAL WIRING INTERCONNECTION SYSTEM (EWIS)

Advanced Topics in System Safety for Commercial Certification
Electrical Wiring Interconnection System (EWIS) and FAA Requirements
Electrical Wiring Interconnection System (EWIS) Safety Assessment – 25.1709
Instructions for Continued Airworthiness using Enhanced Zonal Analysis Procedure (EZAP)
Introduction to Fuel Tank Safety and Ignition Prevention: Design, Certification and Compliance
Introduction to Fuel Tank Safety and Ignition Prevention: SAE ARP6205
System Safety Assessment for Commercial Aircraft Certification

FLIGHT TESTS AND AIRCRAFT PERFORMANCE (FT)

Aircraft Avionics Test and Evaluation Fundamentals
Aircraft Propulsion Systems: Principles and Practices
Aircraft Structures Flight Testing
Airplane Flight Dynamics
Flight Test Principles and Practices
Flight Testing Unmanned Aircraft Systems – Unique Challenges
Fundamentals of V/STOL Rotorcraft
Future Propulsion Systems & Energy Sources in Sustainable Aviation
Operational Aircraft Performance and Flight Test Practices
Operational Test and Evaluation - Customer-Focused Testing
Principles of Aeroelasticity

UNMANNED AIRCRAFT (UA)

Conceptual Design of Unmanned Aircraft Systems
Flight Testing Unmanned Aircraft Systems – Unique Challenges
Propulsion Systems for UAVs and General Aviation Aircraft
Systems and Safety for Electric/Hybrid Electric Aircraft and Urban Air Mobility
Unmanned Aircraft System Software Airworthiness
Urban Air Mobility System Development and Operations

NEW! GRADUATE NON-CREDIT COURSES

Access KU's non-credit Aerospace Engineering graduate classes online, from almost anywhere in the world.

AE 727 – Aircraft Antenna Systems

Instructor: Dr. Emily Arnold

DATES & SCHEDULE
January 20, 2026 – May 15, 2026
Mondays, Wednesdays
2:00 PM – 3:15 PM US Central Time

FORMAT
Online lectures will be available via Zoom

FEE
$2,795 ($2,295 early rate – register and pay by December 6, 2025)

CEUS
35 classroom hours
3.5 CEUs

Description

This course provides a comprehensive introduction to aircraft antenna systems, with a focus on real-world applications in aerospace communication, navigation, and sensing. Designed for professionals in the aerospace industry, this course emphasizes practical design methodologies, CAD tools, and performance analysis techniques relevant to modern aircraft systems.

Participants will gain insight into:

- Integration of antennas into aircraft structures
- Electromagnetic wave propagation and antenna theory
- Low-observable vehicle design principles
- Use of simulation tools like HFSS for antenna modeling

Who should attend?

- Aerospace engineers and technicians
- Systems engineers working in avionics or communications
- Professionals transitioning into antenna design or integration roles
- Individuals seeking to deepen their understanding of aircraft EM systems

No textbook is required; reference materials are provided digitally.

No university credit is awarded for this version of the course, but participants will gain valuable knowledge and experience.

If you are unsure about your readiness, feel free to contact the instructor for guidance or recommended preparatory materials.

AE 508 – Aerospace Structures II

Instructor: Dr. Rick Hale

DATES & SCHEDULE
January 20, 2026 – May 15, 2026
Mondays, Wednesdays, Fridays
10:00–10:50 AM US Central Time

FORMAT
Online lectures and computer labs session information will be available on Canvas

FEE
$2,795 ($2,295 early rate – register and pay by December 6, 2025)

CEUS
35 classroom hours
3.5 CEUs

Description

This course provides a comprehensive introduction to structural analysis techniques used in aerospace engineering, with a focus on finite element methods (FEM) and their application to aircraft and spacecraft components. The course bridges theoretical foundations with practical tools and workflows used in engineering design and analysis.

Participants will gain hands-on experience with:

- Elasticity and energy-based methods for structural analysis
- Finite element modeling of rods, beams, plates, and shells
- MSC/NASTRAN software for simulation and design validation
- Buckling analysis and structural optimization

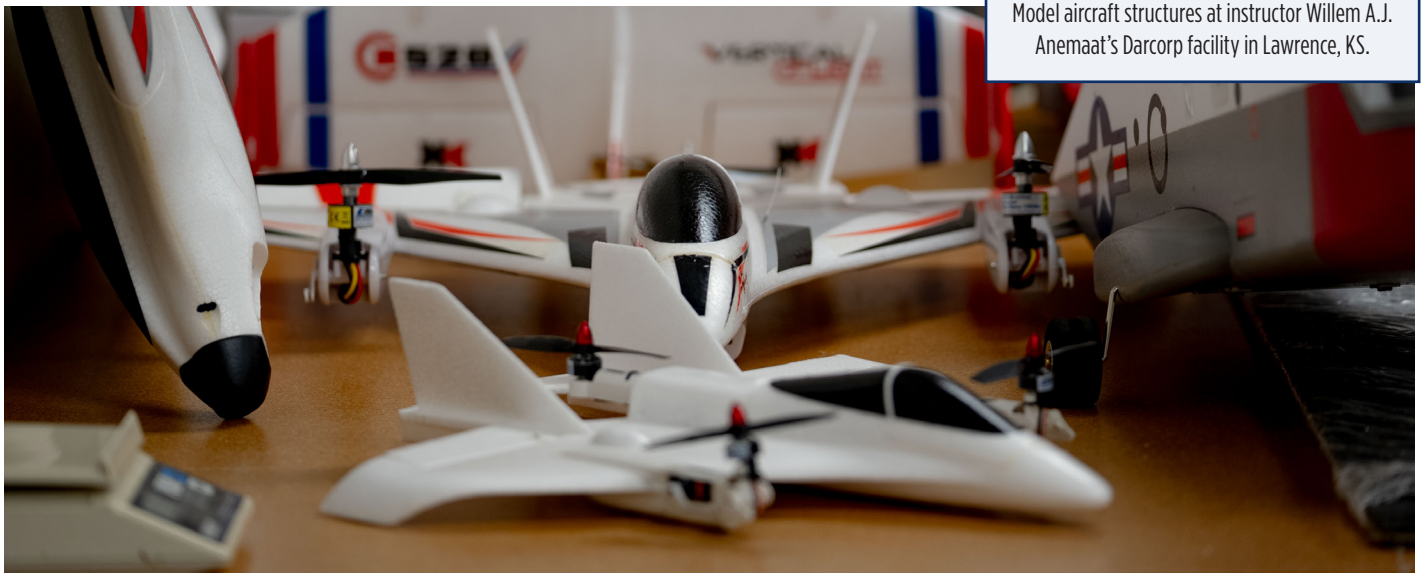
Who should attend?

- Engineers transitioning into aerospace structural roles
- Professionals seeking to deepen their understanding of FEM
- Technical staff involved in design, analysis, or certification of aerospace systems

Prerequisites and Preparation

Participants should have:

- A working knowledge of engineering mechanics (stress, strain, equilibrium)
- Familiarity with calculus and linear algebra
- Basic exposure to structural analysis or finite element modeling is helpful but not required



Model aircraft structures at instructor Willem A.J. Anemaat's Darcorp facility in Lawrence, KS.

2026 AEROSPACE SHORT COURSES

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NEW COURSE
DOCUMENT PURCHASE REQUIRED

Advanced Avionics

Instructor: Albert Helfrick

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACKS
AAC

Description

Advanced Avionics covers systems that will be the mainstay of CNS (communications, navigation and surveillance) in the future. Course material reviews the basic theory of navigation and provides a thorough introduction and survey of global navigation satellite systems (GNSS) with emphasis on GPS. Modern surveillance systems based on Mode-S and ADS-B are also covered as are both wired and wireless communications systems. This course includes in-class exercises that involve college-level mathematics.

Who should attend?

This course is intended for engineers involved in the design and development of avionics components and systems.

> "I strongly recommend this course for those inspectors (whether they work in operations or airworthiness) willing to improve their knowledge and experience regarding avionics uses and principles of operations. The instructor is very well qualified, with wide experience in the design aspects of the systems treated during the course."
>
> – David, Aeronautical Products Certification Manager, Colombian Civil Aviation Authority

Advanced Topics in System Safety for Commercial Certification

Instructor: Pierre Trudel, Douglas Sheridan (This course may be taught by either instructor.)

SAN DIEGO, CALIFORNIA
Sept. 14 - 18, 2026
Monday-Thursday
8 a.m. - 4 p.m.
Friday, 8 a.m. - 11:30 a.m.

FEE
$2,795 ($2,595 early rate – register and pay by July 31, 2026)

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACK
AC, AMS, AAC, EWIS

Description

Advanced System Safety will elevate students' safety process acumen by diving deeper into the safety process and introducing a small cradle to grave project to provide practical experience in using the safety process to help design and develop the proper set of documentation for compliance to requirements.

Who should attend?

This training primarily targets aerospace companies developing aircraft and aeronautical technologies under the oversight of regulators. The training will benefit engineering teams associated with the design and the showing of compliance for a given design (aircraft, systems, or parts). Other segments of industry (such as space and autonomous vehicles) that do not have a strongly defined regulatory enforcement can also benefit from this training. It is recommended that you have taken the following course prior to taking this course: System Safety Assessment for Commercial Aircraft Certification.

Aerodynamic Design Improvements: High-Lift and Cruise

Instructors: Case van Dam and Paul Vijgen

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACK
AD

Description

This course covers recent advances in high-lift systems and aerodynamics as well as cruise drag prediction and reduction. It includes discussion of numerical methods and experimental techniques for performance analysis of wings and bodies and boundary-layer transition prediction/detection.

Who should attend?

Designed for engineers and managers involved in the aerodynamic design and analysis of airplanes, rotorcraft and other vehicles.

Aerodynamic Design of Commercial Airplanes

Instructor: Roelof Vos

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACK
AD

Description

In this course participants learn how aerodynamics drive the detailed exterior design of transport aircraft. Which aerodynamic phenomena play a role in the exterior design of a wing, a cockpit or an engine intake? What is the effect of aerodynamic add-ons such as vortex generators, fairings or winglets? What are the advantages and penalties of wing sweep, and how can the penalties be mitigated by the aerodynamic design of the wing? These are some of the questions this course addresses. Participants learn how the various aircraft components should be shaped in order to fulfill aerodynamic requirements in all corners of the flight envelope. The strong ties between aircraft performance, aircraft aerodynamics and aircraft exterior design are demonstrated through numerous historical and contemporary examples. Although the main focus is on jet aircraft, the course also covers the effects of propeller installation on the aerodynamic design of the empennage.

Who should attend?

Designed for aeronautical engineers, pilots with some engineering background, government research laboratory personnel, engineering managers and educators.

Aerodynamic Design of Military Aircraft

Instructor: Roelof Vos

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACK
AD

Description

In this course it is demonstrated how the aerodynamic design of combat aircraft affect their overall performance. Particular topics that are treated are the effect of (supersonic) aerodynamics on trim, stability, control, and (supersonic) maneuverability.

Who should attend?

This course is targeted to aeronautical engineers, pilots with some engineering background, government research laboratory personnel, engineering managers and educators.

Aircraft Avionics Test and Evaluation Fundamentals

Instructor: Bill Norton

SEATTLE, WASHINGTON
April 13 - 17, 2026
Monday – Friday
8 a.m. – 4 p.m.

FEE
$2,795 ($2,595 early rate – register and pay by Feb. 27, 2026).

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACKS
AAC, FT

Description

This course provides an overview of avionics systems flight test, test planning and risk management, as well as fundamentals of flight test instrumentation and data collection. Students will understand challenges of integrated system testing, as well as the importance and sources of time, space and position information (TSPI) and its use for data acquisition, reduction and analysis. They will review methods of software flight test and basic issues of electromagnetic interference. Students will also become familiar with aerospace data bus architectures, communications and navigation systems, Global Navigation Satellite (GNSS), RADAR, as well as electro-optical and infrared systems and required flight test techniques. Students will also understand the challenges of human-machine interfaces requiring crew station and workload evaluations as part of the aircraft and systems certification process.

Who should attend?

Flight test engineers and managers, instrumentation engineers and project/program managers new to aircraft avionics flight test. The course also offers an opportunity for those who have been out of flight test to refresh their knowledge. It is also applicable to aerospace industry electronics and avionics suppliers and manufacturers of unmanned air systems interested in how their products will be flight tested to meet specifications and user requirements. It is applicable to military and civilian organizations and has no prerequisites. Attendees should have a basic knowledge of college mathematics.

Aircraft Electrification: Architectures, Technologies, and Components

Instructor: Pascal Thalin

KANSAS CITY METRO
May 18 - 22, 2026
Monday - Thursday
8 a.m. - 4 p.m.
Friday
8 a.m. - 11:30 a.m.

FEE
$2,795 ($2,595 early rate – register and pay by Apr. 3, 2026)

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACKS
AD

Description

This course will strengthen students' understanding of aircraft electrification for fixed-wing and VTOL aircraft segments. The stakes, challenges, and applications are addressed in detail. Various degrees of electrification are presented from the perspectives of principles, architectures, technologies, operations and performance.

Who should attend?

Aerospace engineers and managers interested in partial/total electrification of aircraft. Mechanical engineers interested in learning how to design and incorporate electrified portions into their systems. General knowledge in engineering and/or management (graduate to post-graduate) is recommended. Basic knowledge in mechanics & electricity will be helpful.

Aircraft Icing: Meteorology, Protective Systems, Instrumentation and Certification

Instructors: Wayne R. Sand, Steven L. Morris

SEATTLE, WASHINGTON
April 13 - 16, 2026
Monday - Thursday
8 a.m. - 4 p.m.

FEE
$2,495 ($2,295 early rate – register and pay by Feb. 27, 2026)

CEUS
28 classroom hours
2.8 CEUs

CERTIFICATE TRACKS
AC, AMS

Description

This course covers the meteorology and physics of aircraft icing. Topics include forecasting, finding and avoiding icing conditions, designing and evaluating ice protection systems, and certification of aircraft for flight into known icing conditions.

Who should attend?

Designed for aerospace engineers, flight test and design engineers, test pilots, line pilots, meteorologists, FAA engineers and Designated Engineering Representatives (DERs) and program managers.

Aircraft Lightning: Requirements, Component Testing, Aircraft Testing, and Certification

Instructors: C. Bruce Stephens, Darren L. Stout, Tae Yoon (This course may be taught by any of these instructors.)

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACKS
AAC, EME, AC

Description

This course provides details for direct and indirect effects of aircraft lightning testing and certification. Requirements for both composite and metallic aircraft, including proper RTCA/DO-160 classifications, are examined. The course will also include a high-level overview of Electromagnetic Compatibility (EMC), High-Intensity Radiated Fields (HIRF), Precipitation Static (P-Static) and Electrical Bonding requirements. The new requirements of Electrical Wiring and Installation System (EWIS) and Fuel Tank Safety (14 CFR 25.981 Amd. 102) will also be addressed.

Who should attend?

All design engineering disciplines, including project managers, project engineers and laboratory personnel whose aircraft system may require protection from the effects of lightning.

> "This was my first professional development course. I had a very positive experience and left equipped with the tools that I need to help make me and my company successful. Bruce was well-prepared with numerous real-life stories that made the course material relevant. I am sure this won't be the last KU course in my career."
>
> – Daniel Rykert, Engineer, Aerospace

Aircraft Propulsion Systems: Principles and Practices

Instructor: Ray Taghavi

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACK
AD, FT

Description

In this course, students will review the basic principles of propulsion systems with emphasis on jets and fan systems. They will also review inlets and nozzles, compressors, burners, fuels, turbines, and jets culminating in design and off-design engine analysis, performance, and environmental considerations. The impact of propulsion system integration on external aerodynamics and (noise and IR) signature reduction is also presented, along with an introduction to novel concepts in propulsion.

Who should attend?

Engineers, engineering managers, pilots, administrators, and educators involved in rotary wing design, testing, evaluation, or other technical aspects. This course is also suitable for entry through intermediate level students, engineers, and pilots who are new to the industry.

Aircraft Structural Loads: Criteria, Analysis, and Validation

Instructor: Josh Sementi

ORLANDO, FLORIDA
Nov. 2 - 6, 2026
Monday – Friday
8 a.m. – 4 p.m.

FEE
$2,795 ($2,595 early rate – register and pay by Sept. 18, 2026)

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACKS
AS, AD, AC

Description

This course provides an overview of aircraft structural external loads analysis including: criteria, design, analysis, fatigue, certification, validation, and testing. It covers 14 CFR Part 25 airplane load requirements and historical 14 CFR Part 23 requirements, which form the basis of the current ASTM standards. However, the general concepts are also applicable to many military structural requirements, UAV's, and experimental planforms.

Who should attend?

Designed for practicing engineers and engineering managers whose responsibilities relate to aircraft Structures and Loads, either developing Loads, as a recipient of Loads data, or providing input data for Loads analysis.

"This is a very effective course for learning aircraft structural loads. Dr. Sementi is a great instructor. He provided a lot of practical and useful examples from the industry that supplements the understanding."

– Kamruz Zaman, Aerospace Engineer, FAA

Aircraft Structures: Analysis and Design

Instructor: Mark S. Ewing

SEATTLE, WASHINGTON
April 13 - 17, 2026
Monday – Friday
8 a.m. – 4 p.m.

FEE
$2,795 ($2,595 early rate – register and pay by Feb. 27, 2026)

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACKS
AS, AD

Description

This course delivers an introduction to analysis and design of aircraft structures. Course content includes design criteria, structural design concepts, loads and load paths, metallic and composite materials, static strength, buckling and crippling, durability and damage tolerance, practical design considerations and certification, and repairs. Analysis exercises and a design project are included to further involve students in the learning process.

Who should attend?

This course is designed for engineers, educators and engineering managers whose responsibilities include aircraft structures.

"This was an incredible experience for me to be in here, listening to Mark Ewing about aerospace and meeting with people from all around the world."

– Tarik Gençay, System Installation Engineer, Turkish Aerospace

Aircraft Structures Flight Testing

Instructor: William Norton

ORLANDO, FLORIDA
Nov. 2 - 6, 2026
Monday – Friday
8 a.m. – 4 p.m.

FEE
$2,795 ($2,595 early rate – register and pay by Sept. 18, 2026)

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACKS
AS, FT

Description

The course will provide the students with a foundation for understanding structures flight testing to the extent that they can plan and participate in structures flight trials of air vehicles of all kinds. One half will consist of academics, building knowledge of aircraft structures and how they behave. The second half will transition this knowledge into flight test planning and execution techniques used in gathering data to validate predictions and demonstrate flight safety.

Who should attend?

This course would benefit those planning and conducting aircraft flight testing. Depending on the nature of a test program, structures will almost certainly have some bearing and so the fundamentals must be understood. Managers will understand the importance and safety implications of structures and how to build and execute a suitable flight test program. Designers and analysts will understand such tests that deliver vital data and so work more confidently with testers in formulating an effective and efficient test program. Testers will form a solid foundation for performing efficient and safe tests. Test pilots will better understand their role in collecting essential data in a safe manner. All these participants will better appreciate each other's roles.

Airplane Flight Dynamics

Instructor: Willem A.J. Anemaat

SEATTLE, WASHINGTON
April 13 - 17, 2026
Monday – Friday
8 a.m. – 4 p.m.

FEE
$2,795 ($2,595 early rate – register and pay by Feb. 27, 2026)

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACKS
FT, AD

Description

Participants learn an overview of airplane static and dynamic stability and control theory and applications, as well as classical control theory and applications to airplane control systems. An overview of flying qualities and regulations is included.

Who should attend?

Aeronautical engineers, mechanical engineers, electrical engineers needing to learn more about flight dynamics, along with pilots with some engineering background, government research laboratory personnel, engineering managers, and educators.

"I thoroughly enjoyed the course. I would highly recommend the course to other professionals looking to fill in gaps in their knowledge of flight dynamics. I look forward to taking more courses in the future."

– 2022 Airplane Flight Dynamics participant

Airplane Preliminary Design

Instructor: Willem A.J. Anemaat

ORLANDO, FLORIDA
Nov. 2 - 6, 2026
Monday – Friday
8 a.m. – 4 p.m.

FEE
$2,795 ($2,595 early rate – register and pay by Sept. 18, 2026)

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACK
AD

Description

This course provides an overview of the fixed-wing airplane design decision-making process and the relation of design to manufacturing, maintainability, and cost-effectiveness. It is applicable to jet transport, turboprop commuter transport, and military (trainers, fighter bomber, UAV) and general aviation aircraft. The design process covers sizing (weight, wing area, thrust/power), aerodynamics, weight and balance, stability, control, and cost. Numerous examples are shown. Lessons learned and "what to watch out for" are discussed.

Who should attend?

Aeronautical engineers, mechanical engineers, and electrical engineers needing to learn more about design, pilots with some engineering background, government research laboratory personnel, engineering managers, and educators.

Application of Human Factors Engineering to the Life Cycle Management of Aeronautical Products and Systems

Instructor: Andrew Appleton

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
28 classroom hours
2.8 CEUs

CERTIFICATE TRACK
AMS

Description

This introductory course will provide attendees with a solid foundation of knowledge and skills necessary to successfully apply Human Factors Engineering (HFE) and Human System Integration (HSI) to their daily work. Attendees will attain familiarity with and trust in HFE/HSI principles and practices to consider and implement at their workplace. This understanding will provide attendees with the knowledge and skills to inject HFE/HSI at an early stage in the life cycle of their aeronautical products and systems. Doing so will produce a safer, user-centered product that can lower the cost of the product over the entire course of its life cycle.

Who should attend?

Aeronautical product designers, aeronautical system specialist engineers, aviation system safety specialists, aircraft occupant safety specialists, and airworthiness program managers.

Cabin Safety and Crashworthiness of Aircraft Cabin Interiors

Instructor: Prashant Chillamcharla

SAN DIEGO, CALIFORNIA
Sept. 14 - 18, 2026
Monday – Thursday
8 a.m. – 4 p.m.
Friday, 8 a.m. - 11:30 a.m.

FEE
$2,795 ($2,595 early rate – register and pay by July 31, 2026)

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACKS
AMS, AS

Description

This course provides a fundamental review of transport airplane regulatory requirements and compliance-finding methodologies associated with cabin safety and crashworthiness regulations on aircraft cabin interior configurations. The course also reviews FAA/EASA criteria to determine the certification bases of Type Certification and Supplemental Type Certification projects.

Who should attend?

This course is designed for FAA designees, FAA organizational designees/ authorized representatives and certification engineers associated with STC cabin interior projects.

Conceptual Design of Unmanned Aircraft Systems

Instructor: Willem A.J. Anemaat

KANSAS CITY METRO
May 18 - 20, 2026
Monday – Wednesday
8 a.m. – 4 p.m.

FEE
$2,095 ($1,995 early rate – register and pay by April 3, 2026)

CEUS
21 classroom hours
2.1 CEUs

CERTIFICATE TRACKS
AD, UA

Description

This course provides a conceptual approach to overall design of Unmanned Aircraft Systems (UAS) including concepts of operations, communications, payloads, control stations, air vehicles and support. It also covers requirements and architecture development, initial sizing and conceptual-level parametric and spreadsheet assessment of major system elements.

Who should attend?

This course is designed primarily for practicing conceptual-level design engineers, systems engineers, technologists, researchers, educators, and engineering managers. For maximum course benefit, students should have some knowledge of basic aerodynamics and conceptual aircraft design, although it is not mandatory. A basic knowledge of spreadsheet analysis methods is assumed.

> "I took this course because it was a systems-oriented course, and I was also interested in UAS as a hobby. I was pleasantly surprised to find how everything covered in class closely related to job duties, and how applicable it would all be to designing a full-scale aircraft. I came away from the course feeling that I have a good grasp of all the concepts required in putting a UAS together, and where to concentrate efforts to increase the fidelity of the design."
>
> – Xavier Dulin, Systems Engineer, Sierra Nevada Corporation

DO-254: Airborne Complex Hardware Principles and Practices

Instructor: George Meier

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
21 classroom hours
2.1 CEUs

CERTIFICATE TRACKS
AC, AAC

Description

This training will teach students the rules contained within DO-254 and the underlying principles behind them. This class provides for a real-world application of DO-254, teaching the student how to think like the FAA by introducing and describing the goals of DO-254.

Who should attend?

Employees of commercial aircraft companies, those who have aircraft modification concerns, and anyone involved in Type Certificate or Supplementary Type Certificate work.

DO-178C: Airborne Software Principles and Practices

Instructor: George Meier

SEATTLE, WASHINGTON
April 13 - 15, 2026
Monday – Wednesday
8 a.m. – 4 p.m.

FEE
$2,095 ($1,995 early rate – register and pay by Feb. 27, 2026)

CEUS
21 classroom hours
2.1 CEUs

CERTIFICATE TRACKS
AC, AAC

Description

All airborne software on commercial aircraft is mandated to follow DO-178C in its development and verification phases. This training will teach students all the rules contained within DO-178C and the underlying principles behind them. This class provides for a real-world application of DO-178C, teaching the student how to think like the FAA by introducing and describing the goals of DO-178C. The legal implications of DO-178C, and the evolution of the current guidance will also be covered.

Who should attend?

Employees of commercial aircraft companies, those who have aircraft modification concerns, and anyone involved in Type Certificate or Supplementary Type Certificate Work.

DO-297: Integrated Modular Avionics

Instructor: George Meier

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
21 classroom hours
2.1 CEUs

CERTIFICATE TRACKS
TBD

Description

This DO-297 course provides students with an approved outlines and defined methods and processes to follow in developing and certifying IMA Platforms per DO-178C. Since MA is the future as many systems are combined together versus the traditional federated (standalone) systems, this class provides information to build future avionics systems.

Who should attend?

This course will be applicable to any avionics software engineer that is involved in developing IMA platforms. Although helpful, previous completion of a course in DO-178C is not mandatory.

Dynamics for Aerospace Structures

Instructor: Dennis Philpot

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
24.5 classroom hours
2.45 CEUs

CERTIFICATE TRACKS
AD, AS

Description

This course is designed to provide participants with a strong theoretical as well as practical knowledge of the methodologies for performing rigid body and modal-based dynamics analysis on a wide range of structural and mechanical systems. The course builds upon the theoretical foundation with practical applications that can be immediately put into practice in the workplace. Both the theory and practice of classical "hand" analysis techniques are presented, along with the more modern (numerical/computational) methods used in the industry. The subject matter difficulty level is intermediate.

Who should attend?

This course will benefit design engineers who would like to become more familiar with the techniques and modern practices of dynamics analysis to help them be more knowledgeable and bring more capability to the work place. It is also appropriate for mechanical engineers who need to become more proficient in structural dynamics due to a particular job assignment or new career opportunity. Department managers whose staff are involved in loads and dynamics work are also encouraged to attend.

Electrical Wiring Interconnection System (EWIS) and FAA Requirements

Instructors: C. Bruce Stephens, Thomas N. Taylor (This course may be taught by any of these instructors.)

KANSAS CITY METRO
May 18 - 22, 2026

ORLANDO, FLORIDA
Nov. 2 - 6, 2026

Monday – Thursday
8 a.m. – 4 p.m.
Friday, 8 a.m. – 11:30 a.m.

FEE
$2,795 ($2,595 early rate – register and pay by April 3, 2026 for Kansas City or Sept. 18, 2026 for Orlando)

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACKS
AC, AMS, AAC, EWIS, EME

Description

This course discusses the FAA Code of Federal Regulations (CFRs) and design concepts required to ensure all aspects of aircraft electrical wiring and installation are safe. It examines aircraft wiring as a system and reviews all Part 25 CFRs related to EWIS FAA certification. Student teams will review FAA Advisory Circulars and present practical applications of the information in a simulation of the EWIS certification process. EWIS requirements for aircraft maintenance and inspection will also be discussed.

Who should attend?

The course is designed for all aircraft design areas including electrical, avionics, and HIRF/lightning engineers, and aircraft technicians. Aircraft managers and project engineers working in electrical/avionics related areas should also attend.

Electrical Wiring Interconnection System (EWIS) Safety Assessment–25.1709

Instructors: Thomas N. Taylor, C. Bruce Stephens (This course may be taught by either instructor.)

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACKS
AC, AMS, AAC, EWIS

Description

This course focuses on the requirements and methods that can be used to demonstrate compliance to 14 CFR 25.1709 (EWIS Safety Analysis). The discussion will examine the use of FAA AC 25.1701-1 to prepare a functional and physical analysis. The course will also include an overview of the EWIS requirements included in 14 CFR Part 25, subpart H.

Who should attend?

The course is designed for engineers, technicians, and managers involved in the design and certification of Transport Category Aircraft. The course is intended for both original equipment manufacturers (OEMs) and aircraft modifiers.

> "The course was very intuitive and highlighted the importance of EWIS considerations. It also highlighted the fatal consequences of not considering EWIS, which was a definite eye-opener. Really enjoyed the interactive problem solving and activities throughout the course."
>
> – Matthew Walker, New Zealand Defence Force

Electromagnetic Effects Aircraft Level Testing and FAA Requirements

Instructors: C. Bruce Stephens, Darren L. Stout (This course may be taught by either instructor.)

SEATTLE, WASHINGTON
April 13 - 17, 2026
Monday – Thursday
8 a.m. – 4 p.m.
Friday, 8 a.m. – 11:30 a.m.

FEE
$2,795 ($2,595 early rate – register and pay by Feb. 27, 2026)

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACKS
AMS, AAC, AC, EME

Description

This course presents aircraft ground and flight testing concepts that may be required to ensure aircraft-level systems are safe for operation when exposed to electromagnetic effects including high-intensity radiated fields (HIRF), lightning, precipitation static (P-static) and transmitting personal devices (TPEDs). Students will review aircraft testing fundamentals for these conditions and how to coordinate all aspects of EME aircraft-level testing. Students will identify aircraft testing problems and solutions, determine the requirements for ground testing versus flight testing and analyze test data results to demonstrate compliance for HIRF, lightning, P-static and TPEDs.

Who should attend?

The course is designed for engineers and technicians working in all aircraft design and testing areas, including electrical, avionics and communications. Aircraft managers and project engineers who coordinate airplane testing and/or certification-related areas are also recommended to attend.

> "I was not expecting to make as many network connections. I enjoyed meeting people from all over the world and discussing our companies/roles as well as cultural differences. I learned a ton on FAA certification process."
>
> – Lauren Meyer, Flight Test Instrumentation Engineer, Boeing, 2023 EME Testing Participant

FAA Type Certification Plan Development

Instructor: Travis L. Dahna

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACK
AC

Description

This course will prepare attendees to develop a thorough FAA certification plan/project specific certification plan (CP/PSCP) that meets the requirements of Order 8110.4C associated with new type certification projects. Tools for developing a robust compliance checklist (CCL) and the use of appropriate means of compliance will be discussed in detail including the necessary sections, required information and how to define the appropriate documentation supporting those means of compliance. Attendees will utilize the outline and sample template of a certification plan, which can be crafted to meet their project's specific needs. Attendees will also become familiar with the requirements and activities associated with an FAA conformity plan.

Who should attend?

Those actively involved in product or article certification (aircraft/equipment OEM, aircraft modifiers, suppliers, and ODA personnel) including airworthiness engineers, consultants, certification specialists, FAA designees (engineering/manufacturing), and FAA Organization Designation Authorization (ODA) unit and support personnel.

FAA Type Certification Process

Instructor: Travis L. Dahna

KANSAS CITY METRO
May 18 - 22, 2026
Monday – Thursday
8 a.m. – 4 p.m.
Friday
8 a.m. - 11:30 a.m.

FEE
$2,795 ($2,595 early rate – register and pay by April 3, 2026)

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACK
AC

Description

This course will focus on how to successfully complete an FAA type certificate project based on the published process outlined by the FAA, including a review of all required FAA forms and when to use them. Attendees take a deep dive into the type certification process outlined in FAA Order 8110.4, specifically focusing on chapters 1-5 (chapters 6 and 7 will also be discussed, but not in great detail). The instructor will draw from hundreds of real-world type certificate and supplemental type certificate projects – distilling years of information to provide insight into this lengthy and potentially complex process.

Who should attend?

Those involved in product or article certification (aircraft/equipment OEM, aircraft modifiers, suppliers, and ODA personnel) including design engineers, airworthiness engineers, consultants, certification specialists, project managers, quality assurance managers, FAA designees (engineering/manufacturing), and FAA Organization Designation Authorization (ODA) unit and support personnel.

"Amazing course! A unique chance to benefit from a highly experienced teacher still practicing in the domain. Invaluable opportunity to interact and network with people in the industry."

– Isabelle, Bell Textron Canada Limited

Flight Control and Hydraulic Systems

Instructor: Michael Jenkins

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACK
AD

Description

This course covers fundamental design issues along with analysis and design methodologies for aerospace hydraulic and flight control systems. Topics include design requirements, component description and operation, component and system math modeling, component sizing, system layout rationale, system sizing, and airframe integration. The course emphasizes the fundamentals and necessary engineering tools (both analytical and otherwise) needed to understand and design aerospace hydraulic and flight control systems. Practical examples and actual systems are presented and discussed throughout the class.

Who should attend?

This course is designed for system- and component-level engineers and managers including airframe, vendor, industry, and government. It is also designed for educators involved with aerospace mechanical systems.

"This course is excellent for mechanical systems engineers who are relatively new to the field. The course provides a strong foundation in a short period of time, quickly allowing engineers to understand existing hydraulic and flight control systems or take an active role in the design of new ones."

– Lucas Sganderlia, Engineer, Hydraulic Systems

Flight Test Principles and Practices

Instructors: David Kern and Robert Rowe

SAN DIEGO, CALIFORNIA
Sept. 14 - 18, 2026
Monday – Friday
8 a.m. – 4 p.m.

FEE
$2,795 ($2,595 early rate – register and pay by July 31, 2026)

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACK
FT

Description

This course introduces and defines the basic flight test process and application of engineering principles to flight test and description of common flight test practices, and provides an introduction to the flight test discipline. The course is embellished with a variety of examples from completed flight test programs.

Who should attend?

The course is designed for all levels of engineers and managers in industry working on flight test projects, military and civil project engineers, test pilots and flight test engineers, government research laboratory personnel, and FAA and other regulatory agency engineers. It is ideally suited for engineers and managers from other disciplines who are moving into the flight test discipline for the first time or who must interact with flight test engineers regularly on a given project.

Flight Testing Unmanned Aircraft Systems – Unique Challenges

Instructor: William Norton

SAN DIEGO, CALIFORNIA
Sept. 14 - 16, 2026
Monday – Wednesday
8 a.m. – 4 p.m.

FEE
$2,095 ($1,995 early rate – register and pay by July 31, 2026)

CEUS
21 classroom hours
2.1 CEUs

CERTIFICATE TRACKS
FT, UA

Description

This course introduces the primary challenges associated with flight-testing remotely piloted and command-directed (a.k.a. autonomous) vehicles, with primary emphasis on Tactical, MALE, and HALE class systems. The course also recommends solutions to these challenges that are meant to either mitigate or eliminate potential problems before they become unmanageable.

Who should attend?

The course is designed for practicing flight test engineers, test pilots, test managers, aircraft engineers, aircraft designers, and educators who already possess a fundamental understanding of flight test principles and practices. The course content is also appropriate for civilian, military, and academic researchers.

Fundamental Avionics

Instructor: Albert Helfrick

ORLANDO, FLORIDA

Nov. 2 - 6, 2026
Monday – Friday
8 a.m. – 4 p.m.

FEE
$2,795 ($2,595 early rate – register and pay by Sept. 18, 2026)

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACK
AAC

Description

This course provides a very broad overview of avionics. It covers the historical evolution of the avionics industry and usage of avionics to the present day. You will learn why avionics is what it is today, in addition to understanding how it works. The course covers legacy systems still in use and the latest state-of-the-art systems currently being installed. The avionics environment is an important part of this course. In the context of this course, "environment" refers not only to the physical environment of pressure, temperature, vibration, etc. but the regulatory environment. Systems are an important part of this course, and system communications and assessment are covered. This course introduces you to the unique language of avionics (abbreviations, terms and acronyms) and connects these terms to the systems they represent.

Who should attend?

This course is for engineers and technicians involved with avionics but may not have attended formal courses in avionics. It would also suit those who work in a specific area of avionics and who would benefit from learning the latest developments in areas outside of their discipline or a brush-up on basics.

Fundamentals of V/STOL Rotorcraft

Instructor: Harold Rosenstein

KANSAS CITY METRO
May 18 - 21, 2026
Monday – Thursday
8 a.m. – 4 p.m.

FEE
$2,495 ($2,295 early rate – register and pay by April 3, 2026)

CEUS
28 classroom hours
2.8 CEUs

CERTIFICATE TRACK
FT, AD

Description

This course will present key aspects of vertical flight and rotorcraft challenges through a review of the historical evolution, basic principles, and enabling technologies. It will cover the fundamental principles underlying rotorcraft flight, flight performance, rotor limitations, configurations, and conceptual design. Emphasis is placed on relating rotorcraft aerodynamics to airplane aerodynamics for those making the transition.

Who should attend?

This course is designed for engineers, engineering managers, pilots, administrators, and educators who are involved in rotary wing design, testing, evaluation or other technical aspects. The course is also suitable for entry- through intermediate-level students, engineers, and pilots who are new to the industry.

"With 50 years of experience and knowledge gained from working in the industry, Mr. Rosenstein provided invaluable information, starting from the very basics of V/STOL rotorcraft to producing a raw design that is sound and viable."

– David Bates, Technology Investment Manager

Future Propulsion Systems and Energy Sources in Sustainable Aviation

Instructor: Saeed Farokhi

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACKS
AD, FT

Description

This course explores developing propulsion systems and energy sources to support future sustainable air transportation. Students will review the impact of air transportation on the environment and explore new technology development for sustainable aviation including innovations in alternative jet fuels, hybrid electric, all-electric, and nuclear propulsion power. Students will examine modern propulsion for transonic and supersonic-hypersonic aircraft and the impact of propulsion on aircraft design. They will review major advances in the field that will provide performance enhancement, revolutionize design configurations, and ensure the long-term viability of sustainable power.

Who should attend?

Propulsion and power technologists, practicing engineers in aircraft industry, engineers at NASA, FAA, DoD and DOE Labs, engineering faculty, mechanical, aerospace, industrial and power engineers. Engineering students, undergraduates, graduate students and postdocs, government officials working in aviation, and decision makers working on policies dealing with the future of aviation should also attend.

High-intensity Radiated Fields (HIRF) Certification and Compliance

Instructors: C. Bruce Stephens, Darren L. Stout, Tae Yoon (This course may be taught by either instructor.)

SAN DIEGO, CALIFORNIA
Sept. 14 - 18, 2026
Monday – Thursday
8 a.m. – 4 p.m.
Friday
8 a.m. - 11:30 a.m.

FEE
$2,795 ($2,595 early rate – register and pay by July 31, 2026)

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACKS
AMS, AAC, EME, AC

Description

This course presents design concepts required to ensure all aspects of aircraft HIRF electrical wiring, installations, and aircraft-level systems are safe for operation. Students will review the typical HIRF certification process and examine all steps used by aircraft OEMs to demonstrate compliance to HIRF regulations. Students will utilize 14 CFR Part 25, Section 25.1317 *High-intensity Radiated Fields (HIRF) Protection* to determine how HIRF requirements relate to different areas of the aircraft. They will analyze bench testing related to DAL A criticality system rig data and implement safety aspects for HIRF. Students will also review HIRF requirements for aircraft maintenance and inspection. Student teams will simulate the HIRF certification process.

Who should attend?

The course is designed for all aircraft design areas including electrical and avionics, along with HIRF engineers, and laboratory and aircraft technicians. Aircraft managers and project engineers working in electrical/avionics related areas should also attend.

Human Factors Engineering for Civil Flight Deck Design and Certification

Instructor: Gernot Konrad

ORLANDO, FLORIDA
Nov. 2 - 6, 2026
Monday – Friday
8 a.m. – 4 p.m.

FEE
$2,795 ($2,595 early rate – register and pay by Sept. 18, 2026)

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACK
AC, AAC

Description

This course is intended to give engineers, pilots, and managers involved in the design and certification of civil flight decks an introduction to the required human factors engineering activities. The course reviews the physical, physiological, psychological, and cognitive performance capabilities of flight crews. Key topics include applicable certification regulations, design guidelines, industry standards and means of compliance.

Who should attend?

This course is intended for engineers/scientists, pilots, and managers at aircraft manufacturers, system/equipment suppliers, regulators, accident investigation bodies, and research/teaching facilities involved in the design, evaluation/test, and/or certification of flight decks for civil aircraft.

Hydrogen-based Aircraft and Airports: Concepts, Technologies, and Configurations

Instructors: Pascal Thalin

SAN DIEGO, CALIFORNIA
Sept. 14 - 18, 2026
Monday - Thursday
8 a.m. - 4 p.m.
Friday
8 a.m. - 11:30 a.m.

FEE
$2,795 ($2,595 early rate – register and pay by July 31, 2026)

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACK
AD

Description

This course will equip students with the skills necessary to understand hydrogen as an alternative fuel source including its integration with conventional and cleaner fuels for aircraft and airports.

Who should attend?

-Aviation and Aerospace Engineers and Managers (design, testing, certification, operations, maintenance, airport planning).

-Aerospace engineers interested in electric power generation/utilization leveraging hydrogen, hybrid-electric, hydrogen-electric and hydrogen propulsion systems.

-Electrical/mechanical engineers interested in zero-carbon UAS and VTOL, regional, short- and medium-range aircraft.

-General knowledge in engineering and/or management (graduate to post-graduate) is recommended. Basic knowledge about aircraft propulsion and systems, or aircraft/airport operations and/or maintenance will be helpful.

Instructions for Continued Airworthiness Using Enhanced Zonal Analysis Procedure (EZAP)

Instructors: C. Bruce Stephens, Thomas N. Taylor (This course may be taught by either instructor.)

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
21 classroom hours
2.1 CEUs

CERTIFICATE TRACK
EWIS

Description

This course will discuss the Enhanced Airworthiness Program for Airplane Systems/Fuel Tank Safety (EAPAS/FTS) rule. This rule requires design approval holders (DAH) and applicants to develop instructions for continued airworthiness (ICA) consisting of maintenance and inspection tasks, intervals and procedures for the representative airplane's electrical wiring interconnection systems (EWIS) for each affected type design.

Who should attend?

The course is designed for all aircraft design areas including electrical, avionics, EWIS and HIRF/lightning engineers, and aircraft technicians. Maintenance and inspection managers, operators and aircraft managers should also attend.

"This course was very informative with a lot of great information regarding regulatory definitions, implementation and recommendations. The best take-away is the extreme importance and emphasis on safety and wiring/systems (how they are installed, the history of problems)."

– Adrienne Meyers, Maintainability Engineer III

Introduction to Electromagnetic Effects (EME) and Aircraft Engineering Requirements

Instructors: C. Bruce Stephens, Darren L. Stout (This course may be taught by either instructor.)

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACKS
AMS, AAC, EME

Description

This course will provide participants with an understanding of electromagnetic effects related to aircraft engineering requirements, FAA certification requirements, testing requirements for both DO-160 bench testing and aircraft level testing related to EMC/P-Static/ESD/TPED's/HIRF/EWIS and lightning.

Who should attend?

The course is designed for all aircraft design areas including certification engineers and managers, electrical, avionics, HIRF and lightning engineers, and DO-160 laboratory and aircraft technicians. Aircraft managers, project engineers and all other system engineers working in electrical/avionics/HIRF/lightning/EWIS-related areas should also attend.

"This course was very helpful in making the correlation between DO-160 testing, electrical bonding, P-static, and FAA regulations."

– Introduction to Electromagnetic Effects (EME) and Aircraft Engineering Requirements attendee

Introduction to FAA Airworthiness Approval Requirements

Instructor: Travis L. Dahna

SEATTLE, WASHINGTON
April 13 - 16, 2026

SAN DIEGO, CALIFORNIA
Sept. 14 - 17, 2026

Monday – Thursday
8 a.m. – 4 p.m.

FEE
$2,495 ($2,295 early rate – register and pay by Feb. 27, 2026 for Seattle and July 31 for San Diego)

CEUS
28 classroom hours
2.8 CEUs

CERTIFICATE TRACK
AC

Description

This course will provide an overall understanding of the 14 CFR Part 21 requirements necessary to obtain design, production and airworthiness approvals for civil aviation products and articles. Title 14, CFR Part 21 regulations are the backbone of the regulatory framework that enables Aircraft Certification Service (AIR) to conduct its certification responsibilities on products and articles. Under 14 CFR Part 21, §21.1, the FAA defines a product as an aircraft, engine or propeller, while an article means a material, part, component, process or appliance. In addition to 14 CFR Part 21, this course will delve into certain aspects of 14 CFR Part 43, outlining the requirements to receive approval for alterations/repairs for civil aviation products and articles. An overview is provided on FAA organizational structure, additional 14 CFR Parts, regulatory/guidance material, and rulemaking procedures.

Who should attend?

Certification engineers, design engineers, engineering management, program managers, business development personnel, and Designated Engineering Representatives (DER)/Organization Designation Authorization Unit Members (ODA UM).

Introduction to Fuel Tank Safety and Ignition Prevention: Design, Certification, and Compliance

Instructors: C. Bruce Stephens, Darren L. Stout (This course may be taught by either instructor.)

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACKS
AMS, EME, AC, EWIS

Description

This course provides details on all elements of fuel tank design needed for compliance with the regulation, with specific emphasis on electrical design aspects. Some review of regulatory history of 25.984 and 25.981 up to Amendment 25-146 is included for reference for TC, ATC, and STC work. Specific design implementations are examined and evaluated. The course will also include a high-level overview of electromagnetic effects and compatibility (EME/EMC), lightning effects (direct and indirect), high intensity radiated fields (HIRF), precipitation static (P-static), electrical bonding requirements, and requirements for electrical wiring interconnection system (EWIS).

Who should attend?

This course is designed for all design engineering disciplines, project managers, project engineers, and laboratory personnel whose aircraft system may require protection of the airplane's fuel system from ignition/explosion.

"Good course provided by a knowledgeable and experienced instructor. I would certainly recommend it to anyone dealing with 25.981(a)."

– Raoufu, 2022 Fuel Tank participant.

Introduction to Fuel Tank Safety and Ignition Prevention: SAE ARP6205

Instructor: Darren L. Stout

ORLANDO, FLORIDA
Nov. 2 - 6, 2026
Monday – Thursday
8 a.m. – 4 p.m.
Friday, 8 a.m. – 11:30 a.m.

FEE
$2,795 ($2,595 early rate – register and pay by Sept. 18, 2026)

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACKS
AMS, EME, AC, EWIS

Description

This course provides a comprehensive study of SAE ARP6205 and how it applies to the latest regulatory requirements and advisory circulars for aircraft fuel tank safety, Amendment 25-146 and later. This course also contains details on elements of fuel tank design as it applies to ARP6205 which will be needed for compliance with the associated fuel tank safety regulations. A brief review of regulatory history of 25.954 and 25.981 from Amendments 25-11 through 25-146 is included for reference to TC, ATC, and STC activities.

Who should attend?

This course is specifically meant for those who are interested in the latest aerospace recommended practice SAE ARP6205 and its relation to fuel tank safety.

Introduction to RTCA DO-160 Qualification: Purpose, Testing, and Design Considerations

Instructors: C. Bruce Stephens, Darren L. Stout (This course may be taught by either instructor.)

KANSAS CITY METRO
May 18 - 22, 2026
Monday – Thursday
8 a.m. – 4 p.m.
Friday
8 a.m. - 11:30 a.m.

FEE
$2,795 ($2,595 early rate – register and pay by April 3, 2026)

CEUS
31.5 classroom hours
3.15 CEUS

CERTIFICATE TRACKS
AC, AAC, EME

Description

This is an introductory class, designed to educate engineers of all disciplines in the aspects of DO-160 as it pertains to equipment qualification in support of aircraft certification. For each test section of DO-160, we discuss the purpose, adverse effects, and categories. We also provide a high-level, step-by-step guide through the test procedure and design considerations for passing the test. A high-level review of related FAA advisory material and certification requirements will be discussed.

Who should attend?

This class is designed for system engineers responsible for developing requirements for airborne electronic equipment, hardware design engineers responsible for building such equipment, and test engineers responsible for writing test plans.

MIL-STD Qualification: Purpose, Testing and Design Considerations

Instructor: Kevin Renew

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
21 classroom hours
2.1 CEUs

CERTIFICATE TRACKS
AAC, AC

Description

This class is designed to educate program managers, system engineers, design engineers and test engineers/technicians about U.S. military standard-oriented environmental, electromagnetic interference and power quality testing, with the goal of obtaining an airworthiness certification. The course will acquaint personnel involved in new military aircraft efforts or the modifications of existing military aircraft with information about the required testing. It will assist system and design engineers to develop equipment designs that are robust enough to pass the Military Standard testing and test engineers to properly design test plans for their equipment. Program managers will become aware of the time necessary to accomplish this testing.

Who should attend?

This course is designed to benefit any program manager, systems engineer, design engineer and/or test personnel who are or may become involved in the design and manufacturing of any items for which an airworthiness certification is desired.

Operational Aircraft Performance and Flight Test Practices

Instructor: Mario Asselin

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACK
FT

Description

This course provides an overview of airplane performance theory and prediction, certification standards, and basic flight test practices. The course will focus on turbojet/turbofan powered aircraft certified under JAR/CAR/14 CFR Part 25. This standard will briefly be compared to military and Part 23 standards to show different approaches to safety, certification, operational, and design differences. This course will briefly touch on hybrid-electric propulsion.

Who should attend?

This course is designed for aeronautical engineers in the design or flight test departments, educators, aircrews with engineering background, and military personnel involved in managing fleets of 14 CFR Part 25 (FAR 25) certified aircraft.

> "This was an excellent course. I came in with a desire to improve my knowledge of flight test engineering, but I am leaving with more enthusiasm about being an aircraft performance engineer. Thank you for the spark to explore taking my career in a different direction."
>
> – Operational Aircraft Performance and Flight Test Practices attendee

Operational Test and Evaluation: Customer-Focused Testing

Instructors: John Norton

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACK
FT

Description

This OT&E course is designed to introduce students to the language, processes and assorted tools to estimate, plan, accomplish risk assessment, provision, conduct, analyze and report on operational tests. It focuses on the challenges of safe and effective OT&E of ground support elements, aerospace vehicles, on-board systems, human-system interaction issues and logistics suitability.

Who should attend?

This course is designed specifically for operators, maintainers, engineers, and other support personnel. It is also appropriate for those personnel involved in planning, provisioning, conducting, reporting and supporting operational test activities. The course is applicable for military and civilian students as well as academic researchers. It may also be beneficial to those involved in writing user requirements or those involved with defining new system concepts based on market analysis.

Principles of Aeroelasticity

Instructor: Thomas M. Hermann

SEATTLE, WASHINGTON
April 13 - 17, 2026
Monday – Thursday
8 a.m. – 4 p.m.
Friday, 8 a.m. – 11:30 a.m.

FEE
$2,795 ($2,595 early rate – register and pay by Feb. 27, 2026)

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACKS
FT, AD

Description

This course is designed to provide a qualitative understanding of aeroelastic behavior for aerospace vehicles. The class will explore different forms of aeroelastic phenomena and associated issues in structural dynamics and aerodynamic-structure interaction. Topics include solution methodologies, computational methods for aeroelastic analysis, development of the operational flight boundary, aeroservoelasticity, and contemporary topics such as limit cycle oscillations and related nonlinear pathologies in aeroelastic systems. The class addresses practical issues such as ground and flight tests. The course material will require selected study of the essential equations.

Who should attend?

This course is designed for engineers and technical managers involved in aerospace vehicle design, analysis and testing related to aeroelastic response and stability issues. The level of class instruction is appropriate for engineers and managers with an undergraduate degree in engineering.

Principles of Aerospace Engineering

Instructor: Willem Anemaat

SAN DIEGO, CALIFORNIA
Sept. 14 - 16, 2026
Monday – Wednesday
8 a.m. – 4 p.m.

FEE
$2,095 ($1,995 early rate – register and pay by July 31, 2026)

CEUS
21 classroom hours
2.1 CEUS

CERTIFICATE TRACKS
AD

Description

The course will provide an introduction to aerospace engineering principles for non-aerospace professionals. Explanation of different disciplines in an aircraft development program are discussed. Class discussions include introduction to atmosphere, aircraft components, aerodynamics, weight and balance, stability and control, aircraft performance and an introduction to loads. Fixed wing aircraft, VTOL aircraft and helicopters as well as spacecraft (limited) will be introduced.

Who should attend?

Certification engineers, design engineers, engineering management, program managers, business development personnel, and Designated Engineering Representatives (DER)/Organization Designation Authorization Unit Members (ODA UM).

Process-Based Management in Aerospace: Defining, Improving and Sustaining Processes

Instructor: Michael Wallace

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACKS
This course is not assigned to a certificate track.

Description

This course covers foundational principles and the tools and techniques of Process Based Management (PBM) and delineates the strategies for successful implementation of PBM in an aerospace organization. Course content focuses on how to depict an enterprise process view, develop process measures, define key components, and identify critical success factors to maintain the focus on priority requirements for managing processes to achieve sustainable performance improvements. The course includes how these concepts fit with and support Lean, Six Sigma, Total Quality Management, and the Toyota Production System. Several aerospace organizational case studies are used to augment the theoretical components.

Who should attend?

This course is designed for managers, engineers, quality, IT, and planning professionals in the aerospace industry who are responsible for the identification, implementation, and improvement of existing organizational processes and the development of new processes necessary to compete in the future.

Propulsion Systems for UAVs and General Aviation Aircraft

Instructor: Ray Taghavi

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
35 classroom hours
3.5 CEUs

CERTIFICATE TRACKS
AD, UA

Description

This course provides an in-depth understanding of the state-of-the-art propulsion issues specific to UAVs and general aviation aircraft including propulsion options, cycle analysis, principles of operation, systems, components, performance, and efficiencies.

Who should attend?

This course is designed for propulsion engineers, aircraft designers, aerospace industry managers, educators, and research and development engineers from NASA, FAA and other government agencies.

> "Excellent introductory course or refresher for aeronautical engineers with no or minimal previous exposure to general aviation power plants and accessory systems."
>
> – Propulsion Systems for UAVs and General Aviation Aircraft attendee

Safety Management Systems

Instructor: Gary Ullrich

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
28 classroom hours
2.8 CEUs

CERTIFICATE TRACKS
AMS

Description

This course provides an in-depth exploration of Safety Management Systems (SMS), a formal, organization-wide framework for managing safety risk and ensuring the effectiveness of safety risk controls. Recognized as an international best practice, SMS promotes a proactive and systematic approach to identifying hazards and managing safety in aviation and other industries.

Who should attend?

Aerospace Engineers, Customer Support Engineers, Avionics Technicians, and Safety Managers.

Stress Analysis for Aerospace Structures

Instructor: Dennis Philpot

SAN DIEGO, CALIFORNIA
Sept. 14 - 18, 2026
Monday – Thursday
8 a.m. – 4 p.m.
Friday, 8 a.m. – 11:30 a.m.

FEE
$2,795 ($2,595 early rate – register and pay by July 31, 2026)

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACKS
AD, AS

Description

This course is designed for the practicing engineer who has an interest in the various aspects of stress analysis in aerospace structural-mechanical design and would like to enhance their expertise in this important field. The approach taken in this course is to start with a strong theoretical foundation and then build upon that foundation with practical applications that can be immediately put into practice in the workplace. In this manner, both the theory and practice of classical "hand" analysis techniques are presented as well as the more modern (numerical/computational) methods used in the industry. The subject-matter difficulty level is intermediate.

Who should attend?

This class benefits design engineers who would like to become more familiar with the techniques and modern practices of stress analysis to help them be more efficient and productive. It is also ideal for mechanical engineers who have been out of college for a while and need to become more knowledgeable in the area of stress analysis due to a job assignment or career opportunity that requires analyzing structures. Department managers whose staff are involved in stress analysis work should also attend.

Structural Composites

Instructor: Max Kismarton

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACK
AS

Description

This course provides an introduction to high-performance composite materials, covering both engineering and manufacturing of composite parts and assemblies, basic material properties of the constituents (fiber and matrix), how they combine to form plies, or lamina, how to obtain lamina properties, how laminae are combined to form laminates, and how to obtain the laminate properties. Other engineering topics include stress analysis, failure criteria, and testing methods. Case studies and lessons-learned will be discussed. Design using composites will include material selection, lamination rules of thumb, weight analysis, fabrication process description, tool design, and preliminary cost and production rate analysis.

Who should attend?

The course has proven very helpful to those wanting a broad overview and/or intensive intervention in composites, experienced engineers looking for a refresher course, and stress engineers wanting to understand how composites work or fail and what to look out for when analyzing parts, data, and margins. It is useful for practicing engineers and managers with metal experience wishing to expand their skill set, anyone new to the field, and engineering teams embarking on new projects involving composites.

System Safety Assessment for Commercial Aircraft Certification

Instructors: Pierre Trudel, Douglas Sheridan (This course may be taught by either instructor.)

SEATTLE, WASHINGTON
April 13 - 17, 2026

ORLANDO, FLORIDA
Nov. 2 - 6, 2026

Monday – Thursday
8 a.m. – 4 p.m.
Friday, 8 a.m. – 11:30 a.m.

FEE
$2,795 ($2,595 early rate – register and pay by February 27, 2026 for Seattle and Sept. 18 for Orlando)

CEUS
31.5 classroom hours
3.15 CEUs

CERTIFICATE TRACKS
AC, AMS, AAC, EWIS

Description

This course develops the skills necessary to write and review system safety assessments for regulatory compliance to 14CFR 2X.1309 and 23.2510. Class participants are guided through the evolution of the safety rules and specific techniques for compliance through a comprehensive look at the regulations and current regulatory guidance. In-depth reviews of industry standards in system safety such as SAE ARP4761 and SAE ARP4754A, and ASTM F3230-17 followed by exercises, examples and class discussions strengthens the students' understanding of safety for compliance. By the end of the class, students gain the ability to develop meaningful system safety requirements, design safety compliant systems and equipment, and improve their skills in developing system safety compliance documentation.

Who should attend?

This course is intended for anyone involved in the regulatory compliance aspects of system safety. It is specifically designed for Parts 23, 25, 27, and 29 system certification engineers, system designers, FAA Designated Engineering Representatives (DERs), ODA Unit Members (UM), system safety engineers, engineering leadership, and military personnel procuring civil equipment.

Systems and Safety for Electric/Hybrid Electric Aircraft and Urban Air Mobility

Instructor: James Lawson

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
21 classroom hours
2.1 CEUs

CERTIFICATE TRACKS
UA

Description

Electric and hybrid-electric technologies and autonomy pose a unique set of challenges. Nevertheless, using these technologies, the opportunity exists to create novel fault tolerant and redundant architectures. In this course, students gain practical knowledge of the certification approach afforded by Part 23 Amendment 64 applied to non-traditional aircraft types. Students will consider the application of industry consensus standards for electrical propulsions systems, energy storage systems, and sense and avoid. They will recognize different techniques for the creation of safety process artifacts, including Functional Hazard Analysis (FHA), Fault Tree Analysis (FTA), Failure Modes and Effects Analysis (FMEA), and Failure Modes Effects Summary (FMES), and how these might be performed on a complex electric or hybrid-electric aircraft that could incorporate vertical takeoff and landing capabilities. Throughout the course, agile techniques are considered in order that the safety process can guide the design and development of the aircraft.

Who should attend?

This course is designed for Part 23 and Part 33 systems/safety and certification engineers and those involved in the certification of electric and hybrid-electric non-traditional aircraft types. The course assumes a basic understanding of the safety process and certification of a type design aircraft and caters to those wishing to achieve an advanced understanding of how the processes might be adapted to non-traditional aircraft types.

Unmanned Aircraft System Software Airworthiness

Instructor: Willie J. Fitzpatrick, Jr.

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
21 classroom hours
2.1 CEUs

CERTIFICATE TRACKS
AAC, UA

Description

This course covers the software airworthiness requirements for unmanned aircraft systems (UAS). It addresses the development and airworthiness evaluation of complex integrated software intensive unmanned aircraft systems, as well as the relationship between the acquisition/development processes for these systems and the key software airworthiness assessment processes. The course also identifies the deliverables, artifact requirements, and approaches for documenting the software airworthiness assurance case, which is required to ultimately provide the certification/qualification basis for approval of the airworthiness of the unmanned aircraft system. The course offers key lessons learned in the application of the airworthiness assessment processes in software-intensive, unmanned aircraft systems.

Who should attend?

This course is intended for managers, systems engineers, software system safety engineers, and software engineers who design, develop or integrate software in unmanned aircraft systems or evaluate these systems to provide the qualification/certification basis for their software airworthiness.

Urban Air Mobility System Development and Operations

Instructor: Robert Lunnie

This course is not currently scheduled.

Interested in bringing this course to your company? Contact Marina Enclarde, Business Development Manager at 913-897-8781 or professionalprograms@ku.edu.

CEUS
28 classroom hours
2.8 CEUs

CERTIFICATE TRACKS
UA

Description

This course examines the development and operations of Urban Air Mobility (UAM) as critical components for safely and efficiently transporting people and cargo in urban areas. Students will explore the FAA and NASA frameworks for integrating UAM operations into the National Airspace System (NAS), including the phases of initial, midterm, and mature UAM operations.

Who should attend?

Engineering professionals who design and develop aircraft and related technology, specifically systems engineers, mechanical engineers, electrical engineers, and aerospace engineers.

CERTIFICATES OF SPECIALIZATION

Certificates of Specialization are for those who desire concentrated study in a specific area of interest. Achieving a Certificate of Specialization demonstrates to employers, coworkers and the aerospace industry that you are qualified, competent and current in your field. Complete four courses within one of the following nine specializations to earn a certificate:

- Aerospace Compliance (AC).
- Aircraft Design (AD).
- Aircraft Maintenance and Safety (AMS).
- Aircraft Structures (AS).
- Avionics and Avionic Components (AAC).
- Electromagnetic Effects (EME).
- Electrical Wiring Interconnected System (EWIS).
- Flight Tests and Aircraft Performance (FT).
- Unmanned Aircraft (UA).

Visit jayhawkglobal.ku.edu/aero-certificate for more information on Certificates of Specialization and required courses.

HOW TO REGISTER

To Register Online

Visit www.enrole.com/kupce or scan the QR code.

Register By Mail

- Download the registration form (PDF) from our website.
- Complete the form and attach a check or money order payable to University of Kansas. Please reference Jayhawk Global on your check.
- Mail the form and payment to:
  St. Andrews Office Facility,
  Attn: Accounts Receivable
  1515 St. Andrews Drive
  Lawrence, KS 66047

Register By Phone

Please contact us at 785-864-6779.

Payment

All fees are payable in U.S. dollars and due upon registration.

Payment by credit card
Online registrations must be paid by credit card. KU accepts MasterCard, VISA, Discover, and American Express.

Payment by check (personal or company check) or money order
Please mail your registration form and a check or money order in U.S. dollars to the address listed above. Make your check or money order payable to "The University of Kansas." Please reference Jayhawk Global on the check. *A $30 fee will be charged for returned checks.*

Payment by purchase order or wire transfer
Jayhawk Global requires payment upon registration. If your organization requires use of a purchase order before payment is issued or must pay by wire transfer, please contact us at jayhawkglobal@ku.edu. Please note that to receive the Early Registration Discount, full payment will be required before the early registration deadline as listed on each course page.

Visit jayhawkglobal.ku.edu/aero-registration for more registration details and policies.

POLICIES

Audio or Video Recording
Audio or video recording is not permitted in the classroom.

Cancellation Policy
KU Jayhawk Global reserves the right to cancel a course and return all the registration fees in the event of insufficient registrations, inclement weather or other unforeseen circumstances. The liability of the University of Kansas is limited to the registration fee. The University of Kansas will not be responsible for any losses incurred by a registrant including, but not limited to, airline cancellation charges or hotel deposits.

If you are unable to attend a publicly scheduled course, please contact us in writing, and request one of the following options:

- Send a substitute: Substitutions can be made at any time up to the start of the class.
- Transfer to another course: Transfer requests must be made more than five days prior to the course start date.
- Request a refund: Cancellations made up to five days prior to the course start date are subject to a $250 cancellation fee. Cancellations made less than five days prior to the start of a course are not eligible for a refund.

Contact us at jayhawkglobal@ku.edu.

Certificate of Attendance
A certificate of attendance is awarded to each participant. The certificate is accessible through our online registration system.

CEUs
Continuing Education Units (CEUs) are assigned to each course and are listed on each course page. CEUs may not be used for college credit.

Course Materials
University of Kansas Aerospace Short Course notebooks are for participants only and are not for sale. Reproduction or redistribution of course materials is strictly prohibited.

Course Schedule
KU Jayhawk Global and/or its instructors reserve the right to adjust course outlines, schedules and/or materials. Course times and total hours are approximate and may be adjusted by the instructor(s) as the situation warrants.

Instructor Substitution
KU Jayhawk Global reserves the right to substitute an equally qualified instructor in the event of faculty illness or other circumstances beyond its control.

Nondiscrimination Policy
The University of Kansas prohibits discrimination on the basis of race, color, ethnicity, religion, sex, national origin, age, ancestry, disability status as a veteran, sexual orientation, marital status, parental status, gender identity, gender expression, and genetic information in the university's programs and activities. Retaliation is also prohibited by university policy. The following persons have been designated to handle inquiries regarding the nondiscrimination policies and are the Title IX coordinators for their respective campuses: Director of the Office of Civil Rights and Title IX, civilrights@ku.edu, Room 1082, Dole Human Development Center, 1000 Sunnyside Ave., Lawrence, KS 66045, 785-864-6414, 711 TTY (for the Lawrence, Edwards, Parsons, Yoder, and Topeka campuses); Director, Equal Opportunity Office, Mail Stop 7004, 4330 Shawnee Mission Parkway, Fairway, KS 66205, 913-588-8011, 711 TTY (for the Wichita, Salina, and Kansas City, Kansas medical center campuses).

Privacy Policy
KU Jayhawk Global does not share, sell or rent its mailing lists. You have our assurance that any information you provide will be held in confidence by KU Jayhawk Global.

Program Accessibility
Individuals with disabilities are encouraged to attend University of Kansas sponsored events. If you require a reasonable accommodation in order to participate in a course or event, please contact us at professionalprograms@ku.edu or 913-897-8457 at least four weeks in advance of the course or event.

CATALOG INDEX

AEROSPACE SHORT COURSES
2026 REGISTRATION FORM

Easy Ways to Register

Online aeroshortcourses.ku.edu
Phone 785-864-6779
TDD 800-766-3777
Email jayhawkglobal@ku.edu

Mail *Complete the registration form and mail with payment to:*

St. Andrews Office Facility,
Attn: Accounts Receivable
1515 St. Andrews Drive
Lawrence, KS 66047

1 **Please print.** ***If your mailing address requires a different format than indicated here, please use that format and ignore the printed guidelines.***

Full name (first, middle initial, last name or surname, suffix)

Email address (Your confirmation letter and receipt will be sent to this email address.)

Company or organization

Position/job title

Mail stop, building or room number (if needed)

Street address or post office box ☐ Home ☐ Work

City, state or province | Zip+four or postal code | Country

Daytime phone | Alternate/evening phone

Are you a U.S. Citizen? ☐ Yes ☐ No If no, country of citizenship: _____

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2 **Please register me for the following course:**

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3 **FEES** (Registration fees in U.S. dollars are listed on each course page. Please check the course page online at aeroshortcourses.ku.edu or in the Course Catalog.)

☐ Early registration fee (must be paid before the published early registration deadline)
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4 **PAYMENT**

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☐ Check enclosed, payable in U.S. dollars, to **The University of Kansas**.

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