Conceptual Design of Unmanned Aircraft Systems
Instructor: Bill Donovan

SAN DIEGO, CALIFORNIA
September 12–16, 2016
Monday–Thursday, 8:00 a.m.–4:00 p.m. and
Friday, 8:00 a.m.–11:30 a.m.
Course Number AA171020
CEUS
31.5 classroom hours
3.15 CEUs
COST $2,495
Includes instruction, course materials, refreshments and lunches.

EARN A CERTIFICATE
This course is part of the Certificate of Specialization in Aircraft Design and the Certificate of Specialization in Unmanned Aircraft.

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

Highlights
• Introduction to Unmanned Aircraft Systems (UAS), including conceptual design issues and operating environments
• Control station, communication and payload considerations and sizing
• Life cycle cost estimation
• Air vehicle parametric design and propulsion
• Conceptual level aerodynamics
• Standard atmosphere models
• Conceptual level mass estimation
• Parametric geometry
• Air vehicle performance
• Mission assessment
• Methodology and correlation
• Air vehicle optimization
• Overall system optimization
• Reliability, maintainability and support

Who should attend?
Designed primarily for practicing conceptual-level design engineers, systems engineers, technologists, researchers, educators and engineering managers. Students should have some knowledge of basic aerodynamics and conceptual design, although it is not mandatory. Basic knowledge of spreadsheet analysis methods is assumed.

“Bill Donovan and KUs’ Conceptual Design of Unmanned Aircraft Systems course has sparked my interest in aircraft design once again, in a way that’s encouraged me to pursue this field even more.”

—Jay Marcos, GA-ASI