MIT, BOEING, NASA, AND EDX TO LAUNCH ONLINE ARCHITECTURE AND SYSTEMS ENGINEERING PROGRAM

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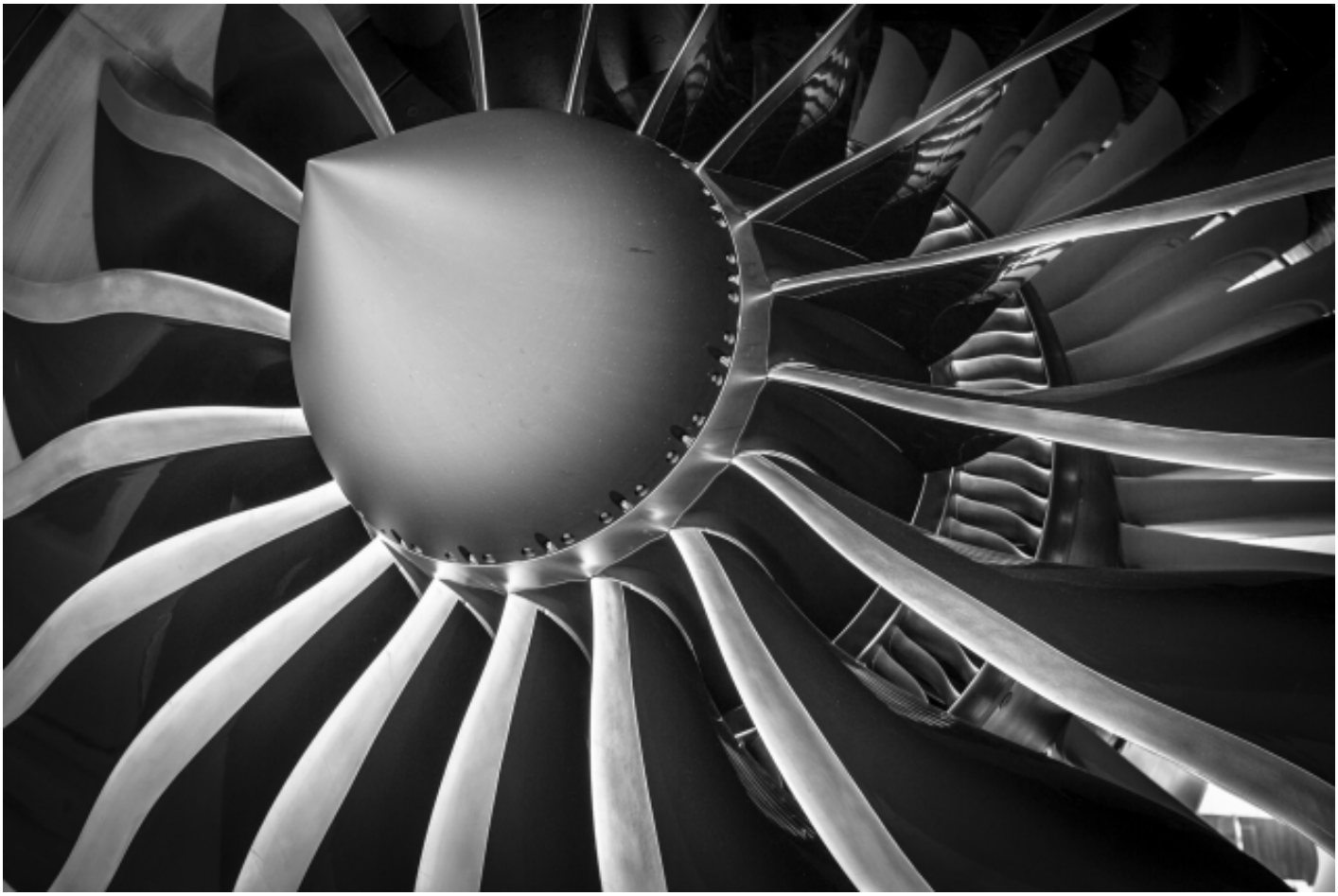

MIT is collaborating with Boeing and NASA to develop a four-part online, certificate-based program: “Architecture and Systems Engineering: Models and Methods to Manage Complex Systems.”

The program aims to ensure that the engineering workforce has continual training and access to the latest knowledge and methods to design and develop products in a rapidly changing environment. The four courses, which will be delivered by MIT Professional Education via the edX platform, will marry the research and knowledge of MIT’s world-renowned faculty with lessons and case studies in industry and government from Boeing and NASA professionals.

Focused on modern complex systems from hybrid cars to aircraft, the program will teach how to frame system architecture as a series of decisions which can be actively sorted and managed. “Engineering practice is changing rapidly in tandem with the growth of software, driving incredible capability changes, but also causing enormous challenges managing complex development programs,” says Bruce Cameron, director of the System Architecture Lab at MIT, and director of

this program.

"This educational partnership enables a digital environment for learning and networking and allows us to offer professional growth to our employees, ” says Marc Nance, Boeing director for competitiveness and integration. “The certificate blends industry and academic expertise and represent a scalable solution for employers,” adds Michael Richey, associate technical fellow and principal investigator at Boeing.

“To manage these complex, highly interdependent designs, traditional systems engineering methods need to evolve to incorporate modern modeling and simulation capabilities. Incorporating these capabilities into systems engineering enables designs that would be nearly impossible to produce affordably with current methods,” adds Christi Gau Pagnanelli, director of systems engineering at Boeing.

Professionals enrolled in the courses will be exposed to the latest practices in model-based systems engineering, including how models can enhance system engineering functions, and how systems engineering tasks can be augmented with quantitative analysis. Courses will include guest lectures and examples contributed by industrial partners Boeing and NASA. Each course will provide continuing education credits (CEUs), and professionals that finish all four courses in the series will earn a professional certificate from MIT. “We believe that this will be a great opportunity for professionals working in a wide range of industries, including automotive, medical devices, system integration and aerospace fields,” Cameron adds.

This online program is the first manifestation of the Space Act Agreement that NASA and Boeing signed last year to support education for a science, technology, engineering, and mathematics capable workforce. “This represents NASA’s initial steps in the realization of a digital transformation of learning and workforce development within the agency,” says Charlie Camarda, space shuttle astronaut and senior advisor for engineering development at NASA's Langley Research Center.

The program will provide a home for professionals to access expert content while keeping up with their day-to-day responsibilities. It will also offer numerous ways to apply and contextualize course content back to the job; for example, learners will work on projects, peer critiques, and they will be able to use special features such as content commenting and theme tagging. "The edX platform will provide an interactive, flexible learning experience for engineers around the world to gain technical expertise from leaders at MIT, Boeing, and NASA," says Anant Agarwal, edX CEO and MIT professor. "We are honored to be part of this innovative collaboration between industry, government, and academia to offer professional education to a global audience."

The “Architecture and Systems Engineering: Models and Methods to Manage Complex Systems” program is set to launch in summer 2016. For additional information and to sign up for program updates, visit the program website.

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