Research consistently demonstrates that, although technical skills are necessary for engineers, there are certain thinking, communication, and interpersonal competencies that set some technical professionals above the rest:

The Rarest & Most In-Demand Skills: Bloomberg Businessweek’s Job Skills Report found that companies state that the least common and most desired skills comprise the following: communication, creative problem-solving, leadership, and strategic thinking.

The Most Critical Skills for Technical Teams: Google studied their workforce in Project Aristotle and found that communication and interpersonal skills topped the list as most critical for their technical teams.

The Skill with Force Multipliers: Harvard Business Review published a study finding that top leaders viewed strategic thinking as twice as valuable as communication and 10 times as valuable as all other behaviors.

The Top Two Competency Clusters – Out of 50,000!: LinkedIn and the World Economic Forum looked at 50,000 distinct skills in their Human Capital Report and the top cluster focused on similar skills, such as communication and leadership.

Technical skills are a minimum barrier to entry, but do you want to trailblaze as a pioneering engineer with a leading edge in the Aerospace & Defense industry? These competencies will elevate your success and that of your organization’s—they’re the Engineering Edge. This program is specifically designed with this research in mind, integrated with the needs of engineers in Aerospace & Defense who want to excel and accelerate with the above-and-beyond attitude. The program includes the following three short, practical and interactive courses.

COURSE 1
The Cognitive Edge: Simplified Strategic & Systems Thinking for Engineering Excellence

COURSE 2
The Customer-Centric Edge: Customer-Mindedness & Influence for Internal Impact

COURSE 3
The Innovator’s Edge: Innovative Thinking, Problem-Solving & Design

Do you have the Engineering Edge? Compare yourself to what the research says...

In Partnership with Northrop Grumman Corporation
COURSE DESCRIPTIONS:

COURSE 1
The Cognitive Edge
Mondays and Wednesdays, 5:00pm—7:50pm
October 8, 10, 15, and 17
Simplified Strategic & Systems Thinking for Engineering Excellence
Supercharge your strategic-thinking skills to focus your goals and tactics with effective models through The Cognitive Edge course. Propel your productivity as you optimize systems-thinking in simplified, concise mental models and science-based frameworks that both stretch and structure your mind’s processes. Through this journey of thinking frameworks, you will assemble practical approaches to challenge how you take daily action and how it leads to long-term career, organizational, and strategic success. Learn the seemingly complex concepts of strategic thinking and systems thinking in rapid, accelerated, and simplified ways that will stick with you.

COURSE 2
The Customer-Centric Edge
Mondays and Wednesdays, 5:00pm—7:50pm
November 5, 7, 12, and 14
Customer-Mindedness & Influence for Internal Impact
In the Aerospace and Defense industry, customer-mindedness combines the strategic-thinking acumen that you learned in The Cognitive Edge with the necessary influence skills and customer-centricity that you will learn in The Customer-Centric Edge. Learn how to influence others on individual and larger-scale levels, as you apply this to your daily collegial relationships and manage up with your managers and executives. Span these influence models with a customer-centric perspective to improve your own performance as an engineer and better understand your organization’s customer-driven goals. Whether or not you are customer-facing, this approach proves necessary for all engineers, as it impacts areas such as design and innovation to collaboration and team dynamics. This course allows you to center the edge on customers when it comes to influence, relationships and a customer-oriented view—these will shape your engineering savvy and augment your interpersonal influence.

COURSE 3
The Innovator’s Edge
Mondays and Wednesdays, 5:00pm—7:50pm
December 3, 5, 10, and 12
Innovative Thinking, Problem-Solving, and Design
When you integrate the strategic and systems models from The Cognitive Edge with the customer-minded and influence tools from The Customer-Centric Edge, you will elevate your engineering excellence with The Innovator’s Edge. This course sharpens your innovative thinking and worldview. Innovation rarely entails grand-scale disruption. The vast majority of the time, we engage in micro-innovation and progressive, subtle shifts toward new direction that evolve a process, product—and even people—over time. These nuanced innovations can lead to major improvements in time. The Innovator’s Edge takes this approach to provide you with innovation as a way of thinking, and practical models to achieve this. As an engineer, you influence innovation, and this course provides you with the practical leverage to do so.

Enroll Now!
Open to Everyone
Eligible for tuition assistance at most organizations.
visit rady.ucsd.edu/programs/executive-education/corporate/engineering-edge/
Makeup sessions may be arranged for enrolled students who are unable to attend a class. Contact Nancy Peritz at nperitz@ucsd.edu.
What Makes this Program Stand Out?
The Engineering Edge stands out with the following features:

**Tailored Specifically toward Motivated Engineers**
The Engineering Edge develops the competencies cited above to provide engineers and your organizations with competitive advantages. The certificate program focuses on both the critical-path areas that engineers need to excel and accelerate beyond most engineers in the industry. These areas entail those such as strategic & systems thinking, visual & design thinking, contract capture and customer-focused approaches, optimized productivity, and clear communication.

**Customized for Aerospace & Defense Engineers**
Even more focused, the program hones in on the industry-specific needs of Aerospace & Defense engineers.

**Dynamic Engineering Executives as Instructors**
The program selects executives with engineering backgrounds who have masterfully integrated the technical, management, and customer-facing competencies. They represent the embodiment of those with the Engineering Edge.

**The Cognitive Lattice**
The program features concise, practical, and actionable mental models. Collectively, these models form a cognitive lattice to augment your thinking. As a lattice forms a structure stronger than the sum of its parts, the Cognitive Lattice does this mentally.

**University of California Certificate**
UC San Diego, an accredited university, will award you a certificate upon completion of the full series.

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**How It Works**

- **3 Short Courses**: Homework free—4 evenings per course
- **Units & Tuition Assistance**: Each course offers 1.2 accredited-university CEUs, for a total of 3.6 program CEUs. Tuition is $1,600 for each course. [Eligible for Tuition Assistance](#).
  Registration remains open through course start date.
- **Earn**: You will receive a grade, units, and transcript from UC San Diego, an accredited university. Complete all three courses in the series and earn an accredited-university certificate from The Rady School of Management, UC San Diego.
Faculty Bios

Christopher Cool
Christopher B. Cool recently retired as the sector Vice President, Enterprise Excellence & Strategy after 34 years at Northrop Grumman Aerospace Systems. He led in the areas of Advanced Manufacturing, Business Systems Integration, Manufacturing Technology, Operating Models, Global Operations Strategy, and sector Make/Buy. As an advisor he helped operationalize the enterprise by integrating strategy, technology, business systems, systems thinking, servant leadership, process and value stream management, and information systems into an integrated sector capability that enables operating models and performance through speed, cost, and efficiency. He has served as a Vice President for over 20 years in various roles.

Janis Mantini
Janis Mantini retired as Director Program Management after 32 years working for The Boeing Company and the former McDonnell Douglas. Throughout her career she has provided leadership in various areas including systems engineering, supplier management, program management, and the design, test, and evaluation of aerospace products. Most recently she led Integration and Program Management for the Networks and Tactical Systems Business, and served as the Program Manager for the Southern California site consolidation. Janis is a Fellow in the Society of Women Engineers and the Institute for the Advancement of Engineering.

Daryl Pelc
Daryl G. Pelc is formerly the Vice President of Engineering & Product Support for Boeing Defense, Space & Security’s Global Services & Support business. He served Boeing for over 35 years in various engineering and management roles, including chief engineer of the GS&S business overseeing the development and deployment of engineering and product support resources, and Vice President of Engineering & Technology for BDS’ Phantom Works business where he led the engineering execution of advanced technology development programs. Pelc is currently a member of the Air Force Scientific Advisory Board (SAB) and an Associate Fellow of the American Institute of Aeronautics and Astronautics (AIAA).

Distinguished Executive Guest Speakers

*In addition to our world-class Engineering Edge faculty, we are confirming esteemed executive Guest Speakers!*

Thank You To Our Partners

The Boeing Company  |  Northrop Grumman Corporation  |  The Raytheon Company

Who Should Enroll?:
Engineers in the Aerospace & Defense industry

Prerequisite:
Engineering Degree

For more information, visit: rady.ucsd.edu/programs/executive-education/corporate/engineering-edge/

For assistance, contact: Nancy Peritz at nperitz@ucsd.edu or (858) 822-7414
A certificate series presented by UC San Diego’s Rady School of Management

The Cognitive Edge

October 8, 10, 15, and 17 | 5:00pm—7:50pm
Northrop Grumman, Building S, 1275B,
1 Space Park Drive, Redondo Beach, CA 90278
Instructor: Daryl Pelc
Course Number: EDGE351

The Customer-Centric Edge

November 5, 7, 12, and 14 | 5:00pm—7:50pm
Northrop Grumman, Building S, 1275B,
1 Space Park Drive, Redondo Beach, CA 90278
Instructor: Janis Mantini
Course Number: EDGE352

The Innovator’s Edge

December 3, 5, 10, and 12 | 5:00pm—7:50pm
Northrop Grumman, Building S, 1275B,
1 Space Park Drive, Redondo Beach, CA 90278
Instructor: Christopher Cool
Course Number: EDGE353

Enroll Now! It’s Easy

Engineering Edge Executive Event

Enroll by September 12, 2018, and your registration will include a seat at this intimate, invitation-only gathering which allows you to engage engineering executives from major Fortune 500-level companies. More info to follow on this exclusive event coming early 2019 to Southern California. After September 12, regular course registration remains open.

Registration opens July 1, 2018.

HERE’S HOW:

Reserve your seat at rady.ucsd.edu/programs/executive-education/corporate/engineering-edge/

Makeup sessions may be arranged for enrolled students who are unable to attend a class. Contact Nancy Peritz at nperitz@ucsd.edu.

Register with your organization’s Tuition Assistance program.

Complete the Terms and Conditions form at rady.ucsd.edu/docs/exec/Terms-Conditions-Agreement.pdf. Send your completed form to radyexecdev@ucsd.edu.

For assistance, contact: Nancy Peritz
nperitz@ucsd.edu | (858) 822-7414
For information: rady.ucsd.edu/programs/executive-education/corporate/engineering-edge/