



# ADVANCED LIGHTWEIGHTING CERTIFICATION TRAINING

Become a leader in your field and a greater asset to your company by taking part in the Siegal Lifelong Learning Program at Case Western Reserve University. In collaboration with Lightweighting Innovations for Tomorrow (LIFT) and other industry partners, our specialized programming offers you the opportunity to increase your team's knowledge of lightweight materials and other additive manufacturing technologies.

**No matter your age or career stage, all STEM professionals can benefit from this program. You'll learn from experienced instructors and leave with the tools necessary to be more confident in your role. You will be part of a nationally certified program and learn from your peers.**

## LEARNING OBJECTIVES:

- Understand practical uses of additive manufacturing, advanced materials and polymers as applied to lightweighting challenges
- Learn to diagnose and solve practical problems using additive manufacturing
- Gain a breadth of knowledge in lightweighting technologies used in various industries
- Gain insights into practical problems through case study analysis
- Access a complementary advanced manufacturing assessment in partnership with MAGNET

## LIFT Curriculum Development Partners:

CWRU SLLP gratefully acknowledges our LIFT curriculum-development partners, including ASM International, MAGNET and Granta Design.

Corporate package discounts available.

Companies who bring three or more participants to a LIFT course are eligible for a discount of 10% of the course cost.

The Lightweighting Certification includes distinct modules in Additive Manufacturing, Advanced Materials and Polymers for Lightweighting. The Professional Certification Program in Lightweighting at CWRU is sponsored in part by CWRU's partnership with Lockheed Martin Corporation and LIFT. The national certification is in collaboration with LIFT, NC3 and CWRU.

For more information, please contact:

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<http://case.edu/cps/courses/lift-program-overview/lift-courses/>



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# COURSES

The Lightweighting certificate courses will be offered on a stand-alone basis or can be taken together as a package.

## LIFT Polymers Lightweighting Certificate

\$1,099/participant

**2018 Course Dates:** March 12th from 9 a.m. to 5 p.m. & March 13th from 9 a.m. to 12 p.m.

**Instructor:** Gary Wnek

- Learn practical uses of polymer characterization methods and structure-property relationships
- Understand polymer science, polymer synthesis and polymer processing
- Demonstrate problem-solving skills in polymers through analysis of case studies in multiple industries

## LIFT Additive Manufacturing for Lightweighting Certificate

\$1,299/participant

**2018 Course Dates:** March 14th from 9 a.m. to 5 p.m. & March 15th from 9 a.m. to 12 p.m.

**Instructors:** Sunniva Collins and Dave Pierson

- Learn where Additive Manufacturing (AM) technologies can be applied for design or economic advantage
- Understand lightweighting AM technologies, trends and applications in various industries
- Demonstrate problem-solving skills in lightweighting through analysis of case studies with our AM experts

## LIFT Advanced Materials for Lightweighting Certificate

\$1,099/participant

**2018 Course Dates:** March 26th from 9 a.m. to 5 p.m. & March 27th from 9 a.m. to 12 p.m.

**Instructors:** Bob Bianco, Sujit Das and Mike Heil

- Learn the fundamentals of materials science and how to improve properties such as strength, stiffness and ductility in a wide array of lightweight material options
- Understand the use of advanced materials databases (e.g., Granta) and the impact of key market drivers on the selection criteria for critical applications in the transportation industry
- Demonstrate the concepts introduced in this course through select case studies provided by resources across the country

## Multi-Course Integrated Module

- An integrated course module discount of 10% for the full certificate is available for individual participants in all three LIFT courses.

**Subsequent trainings planned for June 2018, October 2018 and December 2018**

March 2018 LIFT courses will be held at Case Western Reserve University, 10900 Euclid Avenue, Cleveland, Ohio 44106.

Other locations will be announced soon.

