

PROCESSING-STRUCTURE-PROPERTIES FOUNDATIONS IN ADDITIVE MANUFACTURING



February 13-15, 2023

This course will include three virtual modules. On-demand access will be available through March 17, 2023.

Gain valuable skills and a firm foundation in processing, the structure, and properties of additive manufacturing (AM) in the second iteration of this online course. Processing-Structure-Properties Foundations in Additive Manufacturing will provide participants with this knowledge base through three modules taught by a team of experts. In the first module, instructors will give an overview of processing in direct metal additive manufacturing technologies and their industrial applications and then lead an in-depth discussion on the process design framework. The second and third modules cover the structure and properties of additive manufacturing materials. This course is designed for industry professionals, researchers, and university students, as well as leaders and managers who would like to gain new knowledge and skills in AM.

WHAT YOU WILL LEARN

Process Development in Direct Metal Additive Manufacturing Technologies

Explore a high-level overview of processing in direct metal AM technologies and their industrial applications with a deep dive into the process design framework.

INSTRUCTORS:



Nadia Kouraytem,
Utah State University



Sneha P. Narra,
Carnegie Mellon University

Microstructure Development

Learn the fundamental relationships between AM processing variables and the thermal profile (in situ and post-build) experienced by the component on microstructure development in AM materials.

INSTRUCTORS:



Alex Plotkowski,
Oak Ridge National Laboratory



Andrew Polonsky,
Sandia National Laboratories

Properties

Discuss the properties of AM materials and compare AM static and dynamic properties to other manufacturing processes and the test methods used.

INSTRUCTORS:



Amber Andreaco,
GE Additive



Joy Gockel,
Colorado School of Mines
(Lead Instructor)

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www.tms.org/AMCourse2023