

June 20 - 21, 2024\*

Hosted by 3DFIA, Daejeon Technopark & FusionTechnology  
At 10th floor, D-Station, Daejeon Technopark,  
119, Jungang-ro, Jung-gu, Daejeon, Republic of Korea

**ASTM CERTIFICATE COURSE**  
in conjunction with InLEX Exhibition

# Methods of Qualification and Certification for AM

ASTM International, who has been providing world-class training on Additive Manufacturing (AM), provides a training course with the mission to support scaling up of AM adoption.

\*Full-day sessions June 20 – 21 (Thu & Fri, 9 a.m. – 6 p.m.)

Gain awareness on the best practice and the latest advancements in AM

Learn from experts from ASTM AMCoE and Auburn University

Earn a globally recognized certificate from ASTM International

**Opening Address:**

Dr. Mohsen Seifi  
VP, ASTM International

**Instructors:**

Dr. Mohsen Seifi, ASTM International  
Dr. Nima Shamsaei, Auburn University  
Dr. Khalid Rafi, ASTM International  
Mr. Andy Lu, ASTM International

**Point of Contact:**

Mr. Andy Lu, ASTM International  
alu@astm.org

## About the Course

**Course Level: Intermediate to Advanced users**

**Course Language: English & Korean translation provided**

**Course Textbook: English & Korean provided**

This course covers the requirements and routes to validation for metal additive manufacturing parts produced by powder bed fusion and directed energy deposition manufacturing processes. This course will leverage recent case studies from the PBF and DED world to provide context for Structural Integrity challenges and opportunities.

The 2-day training course is based on ISO and ASTM standards and is aimed at those who are using, or plan to use, AM in serial or critical applications and would like to learn more about the routes to Qualification and Certification. Attendees would be required to have a strong background in Additive Manufacturing.

The instructors have in-depth experience of Materials, Qualification & Certification, and making parts from Additive Manufacturing Methods. The learning methods are based on logic and experience, and real-life best practices (and lessons learned) will be shared. This is not a series of lectures; there will be discussions, mini-workshops, and plenty of opportunities to ask questions.

### Who should attend?

This course is suitable for AM Engineers, AM operators, QA/QC Engineers, and other individuals with existing experience in AM who wish to know the route to qualification and certification.

### Course Fees:

\$799 per person (early-bird price for registration at/before May 20)

\$999 per person (regular price for registration after May 20)

Registration Link: Scan or click the QR code on the right



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Day 1 Jun 20	Topics	Day 2 Jun 21	Topics
1000 – 1030	Registration; Welcome and Introduction	1000 – 1030	Recap of Day 1; Q & A Session
1030 – 1130	<b>AM Foundations</b> <ul style="list-style-type: none"> <li>Fundamentals of Qualification &amp; Certification</li> <li>Key ingredients</li> <li>Overview of Qualification &amp; Certification framework</li> <li>Overarching and foundational controls</li> </ul>	1030 – 1115	<b>Material Properties, Allowable, Material Property Suite</b> <ul style="list-style-type: none"> <li>Material Properties</li> <li>Material allowable and design values</li> <li>Mechanical property measurements</li> <li>Engineering equivalence</li> <li>Material property suite</li> </ul>
1130 – 1230	<b>Classifications &amp; Consequences</b> <ul style="list-style-type: none"> <li>AM Part Classification</li> <li>Consequences</li> <li>Structural Integrity</li> </ul>	1115 – 1230	<b>Part Production Controls, NDE Considerations, Defects, Managing Supply Chain</b> <ul style="list-style-type: none"> <li>AM part planning &amp; AM part production plan</li> <li>Pre-production article</li> <li>Qualified AM Part process</li> <li>NDI considerations &amp; Part Zoning</li> <li>In-situ monitoring &amp; Supply chain</li> </ul>
1230 – 1400	Lunch Break	1230 – 1400	Lunch Break
1400 – 1500	<b>Requirements &amp; Standards</b> <ul style="list-style-type: none"> <li>Requirements overview</li> <li>Importance of standards</li> <li>Process mapping with standards</li> <li>Regulatory requirements</li> </ul>	1400 – 1530	<b>Qualification Testing &amp; Service</b> <ul style="list-style-type: none"> <li>Qualification testing</li> <li>Industry perspective on AM qualification</li> </ul>
1500 – 1730	<b>Route to Qualification &amp; Certification</b> <ul style="list-style-type: none"> <li>Materials and process foundations</li> <li>Machine and process qualifications</li> <li>IQ/OQ/PQ</li> <li>Candidate Material Qualification</li> </ul>	1530 – 1700	<b>Case Studies, Working Session for Critical Applications</b>