



Rapid Prototyping Laboratory



Materials Science Laboratory

## Certificate in Additive Manufacturing

This specialization serves engineers seeking to advance their careers by providing a modernized and flexible program in one of the most important upcoming technologies to affect industry.

### WHY STUDY ADDITIVE MANUFACTURING AT LMU?

- Strategic location in close proximity to companies in the aerospace and defense industries utilizing Additive Manufacturing to increase their part complexity, design flexibility and cost efficiency.
- Faculty, staff, and industry personnel consists of internationally reputable experts.
- Hands-on experience supported by extensive access to diverse laboratory equipment and facilities.
- Creative freedom to explore experimentation opportunities and innovations



Rafiq Noorani  
Rapid Prototyping



Omar S. Es-Said  
Materials Science



Hossein Asghari  
Nondestructive  
Testing

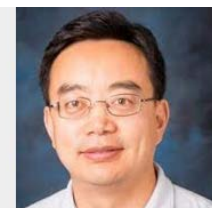
### Faculty

### PROGRAM OUTCOMES

- Learn the principles and applications of additive manufacturing in industrial and medical fields– how additive manufacturing works, how to design and prototype parts or assemblies using different prototyping technologies.
- Implement strategic design considerations for various additive manufacturing processes and materials.
- Understand the special guidelines for additive manufacturing and post-processing of metals and be able to design and manufacture a real-world metal part.



Xiaodong Sun  
Laboratory Support  
Associate, Instructor

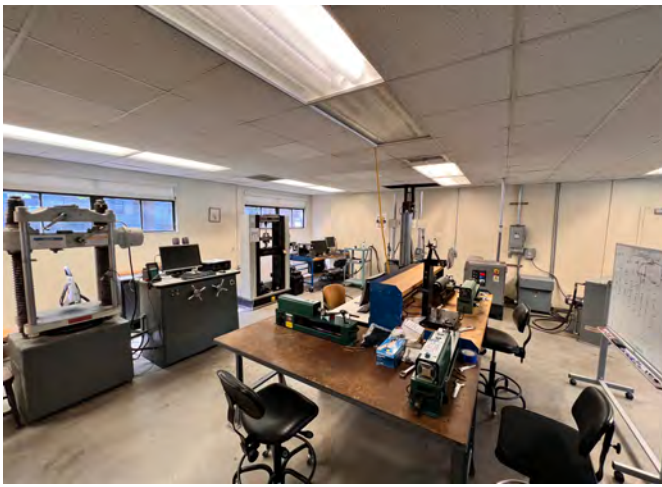


Yong-Ju Li  
Laboratory Support  
Associate, Instructor

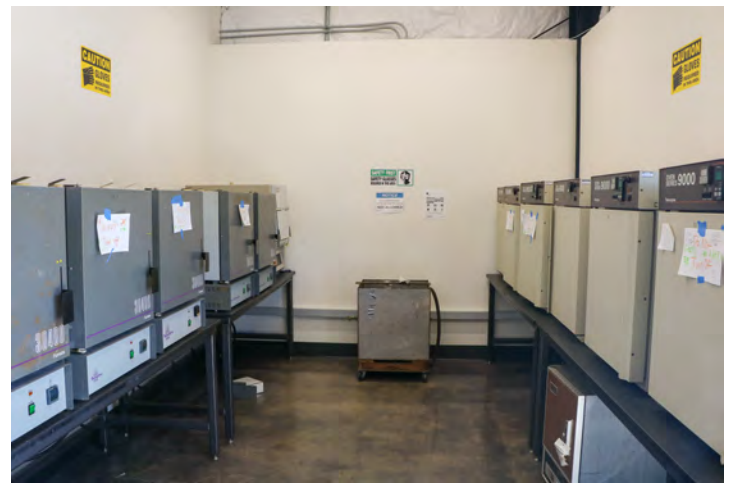


Tim Breman  
Laboratory Support  
Associate

### Staff



Structures Laboratory



Heat-Treating Furnaces and Ovens

## ADMISSION CRITERIA

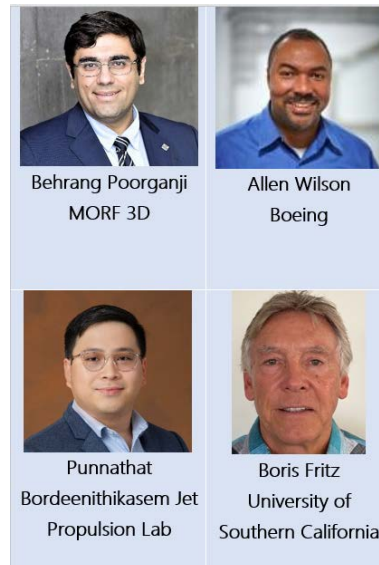
Applicants must have completed a B.S in mechanical engineering. If the B.S is in another engineering field or in physics or chemistry then the following lower division, undergraduate courses: Mechanics of Materials, Dynamics, Thermodynamics, Fluid Mechanics, and Heat Transfer must be completed.

These conditions apply to applicants from industry who are interested in pursuing the M.S. degree or only obtaining the Certificate in Additive Manufacturing. The Certificate totals to only 9 units required for completion, with option to select any 3 courses out of all 4 offered courses. If the Certificate is selected then its 3 courses can be applied to the M.S. graduate program which is only 10 courses, therefore you would only have 7 courses remaining to earn the complete M.S. degree.

If industry personnel decided to only take courses in Additive Manufacturing without pursuing the M.S. degree, they would earn a standalone certificate.

Fall 2022	Spring 2023
MECH 637 Rapid Prototyping	MECH 639 Design for Additive Manufacturing
and	and
MECH 598/698 Additive Manufacturing	MECH 610 Metallurgical and Materials Engineering

Any 3 of these 4 courses listed in the table above will earn you a certificate.



Experts Involved in Teaching and Research in the Certificate Program



### Contact

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**Loyola Marymount University**  
**Frank R. Seaver**  
**College of Science**  
**and Engineering**