Certificate in Additive Manufacturing

The certificate in additive manufacturing is primarily intended for graduate students interested in enhancing their knowledge and skills in additive manufacturing and 3D printing. The curriculum focuses on key materials, technologies and benefits. It includes topics on design considerations, postprocessing, secondary operations, and important quality and safety factors.

Additional concepts important to product development in aviation and biomedical industries are addressed and exercised as term projects.

The certificate is offered jointly by the ISME and ME departments.

Program Requirements

In addition to completing IME 222 or its equivalent as a preparatory course, the program requires satisfactory completion of 12 credit hours, three required courses and one of the elective courses listed below.

Course	Title	Hours
Preparatory Course		
IME 222	Engineering Graphics (or its equivalent)	
Required Courses		
IME 775	Computer Integrated Manufacturing	3
IME 788	Rapid Prototyping and 3D Printing	3
And one of the following:		*3-4*
IME 558	Manufacturing Methods and Materials II	
IME 762	Smart Manufacturing	
ME 665	Selection of Materials for Design and Manufacturing	
Elective		
Select one of the following approved elective courses		3
AE 760AA	Micromechanics and Multi-Scale Modeling	
BME 777	Biodegradable Materials	
ME 870	Advanced Laser Applications in Manufacturing [1]	
ME 870L	Advanced Laser Applications in Manufacturing Lab [1]	
AE 890	Independent Study [2]	
BME 890	Independent Study [2]	
IME 890	Independent Study in Industrial Engineering [2]	
ME 890	Independent Study in Mechanical Engineering [2]	
Total Credit Hours		**12-13**

[1] To be taken together in the same semester.

[2] Independent study on additive manufacturing topics subject to approval by the certificate program coordinator.

In addition to these requirements, students must meet the Graduate School's requirements (http://catalog.wichita.edu/graduate/academic-information/types-programs-courses/certificate-residency-badge-programs/) in order to earn this certificate.