

# ADVANCED MATERIALS CHARACTERIZATION (GRADUATE CERTIFICATE)

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The Institute of Materials Science (IMS) offers a 12-credit fully online certificate program to train engineers in the characterization of advanced materials that are crucial to creativity, innovation and product analysis and quality control in the globally competitive economy. The certificate program builds competency in the analysis of advanced materials systems related to understanding compositions and physical properties of materials, data analysis, sample preparation methods, and basic operation of spectroscopy, chromatography, and microscopy equipment. The program aims to teach scientists and engineers analysis, decision-making, optimization, verification and validation of materials systems.

## Required Courses

Course	Title	Credits
IMS 5301	Microstructural and Morphological Analyses	3
IMS 5302	Structural Analysis	3
IMS 5303	Compositional Analyses	3
IMS 5304	Surface and Interfacial Analysis	3
Total Credits		12