

MASTER OF CHEMISTRY IN MATERIALS CHEMISTRY

The professional master's program in materials chemistry is a part-time program designed for scientists who wish to broaden their background in synthesis, characterization, and properties of materials and chemical systems. The program combines modern materials design and synthesis strategies with innovative characterization techniques, computational and simulation methods, project management, technical communication, and intellectual property management. It is structured to provide students with opportunities to develop a broad understanding of materials synthesis and characterization, to learn to design and manage projects, and to sharpen their intellectual property management.

Candidates seeking admission to this program must have a bachelor's degree (ideally in science or engineering), with at least two semesters of organic chemistry and two semesters of calculus. The academic adviser will assist students in determining whether any prerequisites are necessary. A final comprehensive examination is required for graduation. This program is also available on the web. Students should consult science.iit.edu/chemistry for more information.

Curriculum

Required Courses		(27)
CHEM 454	Chemical Modeling and Simulation	3
CHEM 470	Introduction to Polymers	3
CHEM 505	Spectroscopic Methods I	3
CHEM 509	Physical Methods of Characterization	3
CHEM 521	Structural Inorganic and Materials Chemistry	3
CHEM 522	Efficient Chemical and Materials Synthesis	3
CHEM 535	Polymer Synthesis	3
SCI 511	Project Management	3
SCI 522	Public Engagement for Scientists	3
Elective Courses		(5-6)
Select a minimum of two courses from the following:		5-6
CHEM 513	Statistics for Analytical Chemists	3
CHEM 524	Synthesis and Intellectual Property Management	2
CHEM 530	Organic Reaction Mechanisms	3
CHEM 531	Tactics in Organic Synthesis	3
CHEM 542	Polymer Characterization and Analysis	3
Total Credit Hours		32-33