

MATERIALS SCIENCE, CERTIFICATE

14-16 Credit Hours Required for the Undergraduate Certificate in Materials Science

Required Courses:

Code	Title	Hours
CHEM 4810	Materials Science I	4
CHEM 4820	Materials Science II	4
Choose 2 Required Elective Courses From:		6-8
CHEM 4200	Green Chemistry	
CHEM 4830	Nanomaterials Science	
CHEM 4850	X-Ray Crystallography	
CHEM 4800	Advanced Materials Chemistry	
PHYS 4510	Physics Of Condensed Matter	
PHYS 4580	Molecular And Condensed Matter Laboratory	
PHYS 4630	Semiconductors 1	
Total Hours		14-16

- Demonstrate an understanding of foundational concepts in chemistry and physics as applied to materials science.
- Demonstrate an understanding of material structure, defects, diffusion, equilibria, phase transformations, and growth and implications for classes of materials, materials characterization, or applications.
- Communicate technical information clearly and accurately in written, oral, and visual formats.
- Locate and use information in the primary literature and research databases.
- Critically read, assess, and evaluate scientific publications, presentations, and data.
- Understand and observe proper safety, ethical, and professional practices.
- Apply scientific skills in an interdisciplinary scientific context.