Materials Science

Engineering Department

Email: info@sharif.edu

Website: http://mtl.sharif.ir/

Address: Department of Materials Science and Engineering, Sharif University of Technology, Azadi Street, P.O. Box: 14588/89694, Tehran, Iran

Telephone number: +98 21 6616 5201-2

Sharif University of Technology was founded in 1966, with the purpose of training capable engineers for the then newly established Isfahan iron and steel complex. It is therefore reasonable to assume that this department was (and still is) a cornerstone of the university. Many of our graduates decide to enter further education programmes offered by this department, or other institutes worldwide. Many top universities and reputable research organization benefit from the services and expertise of Sharif University materials engineers.

Undergraduate Course Structure

1st year	2nd year	3rd year	4th year
• Math (I), (II) • Physics (I), (II) • Physics lab (I), (II) • Chemistry (I) • Chemistry Lab (I) • Graphics • Statics • Introduction to Materials Science • General Workshop	• Differential Equations • Principles of Electrical Engineering • Mechanics of Materials • Crystallography • Crystallography Lab • Physical Chemistry • Engineering Mathematics • Computer Programming • Mechanical Properties of Materials • Mechanical Properties of Materials Lab • Physical Metallurgy (I) • Physical Metallurgy Lab (I) • Materials Thermodynamics	• Transport Phenomena • Numerical Methods • Physical Metallurgy (II) • Physical Metallurgy Lab (II) • Electronic Structure • Principles of Materials Processing (I) • Electrochemistry & Corrosion • Polymers • Ceramics • Principles of Metal Forming • Solidification & Casting • Principles of Materials Processing (II) • Surface Engineering	• Technical Report Preparation • Welding Engineering • Research Project • Elective Courses

Graduate Program

Our master's degree is comprised of taught courses and a research project, and is offered in nine different disciplines, namely:

- Materials selection and analysis
- Corrosion engineering
- Welding eng.
- Casting
- Production and refining of metals
- Metal forming
- Ceramic engineering
- Biomaterials
- Nanomaterials

Graduate Research Fields and Facilities

The Department of Materials benefits from a number of high profile research and service labs. As a consequence of the diversity of subjects and fields in the department, many research labs have been established over the years to meet the demands of different research groups. Some of these labs and research centers are listed below:

- RCNAM (research center for nanostructure and advanced materials). Incorporating centers for electronic materials, nanostructures, and nanobiomaterials research.
- Solidification and casting lab.
- Polymers lab.
- Powder and nanoparticles lab.
- Welding lab.
- Mechanical properties lab.
- Surface and coating lab.
- Ceramics lab.
- Metal forming lab.
- Chemical metallurgy lab.
- Heat treatment lab.
- Materials processing lab.
- Metallography lab.
- Materials analysis lab
- Magnetic materials lab
- General workshop

Career opportunities

Graduates of this department have found it very convenient to build their careers, both in research and in industry. There are numerous career opportunities for graduates opting to work in industry. Iran has recently announced her intentions to deploy a non-petroleum based economy; metals processing, industrial parts manufacture, ceramics and polymer related industries are expected to boom. We expect our graduates to take their shares from the upcoming job market.