

# Electrical

## Engineering Department

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The Electrical Engineering Department of Sharif University of Technology is the country's top electrical engineering institute with international-level research and constant influx of the best students at both the undergraduate and graduate levels. The department hosts many research laboratories as well as three national centers of excellence, i.e., Communication Access Systems, Cryptography, and Power System Management and Control.

### Undergraduate Course Structure

1st year	2nd year	3rd year	4th year
<ul style="list-style-type: none"> <li>• Math. (I), (II)</li> <li>• Physics (I), (II)</li> <li>• Principles of Electrical Engineering</li> <li>• English Language</li> <li>• Diff. Equations</li> <li>• Analog Circuits</li> <li>• Computer Programming</li> </ul>	<ul style="list-style-type: none"> <li>• Network Theory</li> <li>• Engineering Math.</li> <li>• Numerical Analysis</li> <li>• Electromagnetics</li> <li>• Logic Circuits &amp; Digital Systems</li> <li>• Circuits &amp; Systems</li> <li>• Probability &amp; Statistics</li> <li>• Computer &amp; Microprocessor Structure</li> <li>• Electric Power Conversion (I)</li> </ul>	<ul style="list-style-type: none"> <li>• Communication Systems</li> <li>• Electronics</li> <li>• Linear Control Theory</li> <li>• Power System Analysis (I)</li> <li>• Two compulsory courses and one elective course from the specialization field</li> </ul>	<ul style="list-style-type: none"> <li>• One compulsory courses and one elective course from the specialization field</li> <li>• Two elective courses</li> <li>• BSc project (I)</li> <li>• One elective course</li> <li>• Engineering Ethics</li> <li>• BSc project (II)</li> </ul>

### Graduate Program

Graduate courses in electrical engineering are offered in the following areas:

- Communications (Communication systems,

Cryptography, Electromagnetics & Optics)

- Electronics (Circuits, Electronic devices)

- Electric Power Engineering (Power systems,

Power Electronics & Electric Machines, Power System Control & Management)

- Control Engineering
- Digital Systems
- Bio-Electric Engineering

### Graduate Research Fields and Facilities

The Electrical Engineering Department has numerous general and specialized laboratories, as well as extensive facilities devoted to experimental studies and research programs in the areas of Communications, Electronics, Electric Power Engineering, Control Engineering, Digital Systems, and Bio-Electric Engineering. Moreover, the department accommodates three national centers of excellence:

- **Center of Excellence for Multi-Access Communication Systems**

Director: Babak Khalaj  
Email: [khalaj@sharif.edu](mailto:khalaj@sharif.edu)

- **Center of Excellence in Information Security and Cryptography**

Director: Mohammad Reza Aref  
Email: [aref@sharif.edu](mailto:aref@sharif.edu)  
Website: [www.ceisc.ee.sharif.edu](http://www.ceisc.ee.sharif.edu)

- **Center of Excellence for Power System Management & Control**

Director: Mehdi Ehsan,  
Email: [Ehsan@sharif.edu](mailto:Ehsan@sharif.edu)  
Website: <http://ee.sharif.ir/cepsmc/>

### Career opportunities

A high percentage of the graduates of the Electrical Engineering Department at Sharif University of Technology continue their studies at MSc and PhD levels both inside the country and abroad. Moreover, there are numerous domestic job opportunities in Power Engineering, Communications, and Digital Systems. Sharif's EE department is well known for its many notable alumni in the academic world and industry, both nationally and internationally.

