

SHARIF UNIVERSITY OF TECHNOLOGY











2018



2019

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President's Message

Sharif University of Technology



On the eve of its fiftieth anniversary, Sharif University is celebrating over half a century of concerted efforts to promote excellence in education and research. It was initially founded to educate specialists in various fields of industry, but it has gone on to become the leading technical university in Iran and among the best in the Middle East region. We are proud of the body of over 40,000 alumni who have contributed immensely to science and technology, industry, business, and, indeed, politics, worldwide.

Sharif enjoys a unique position in the Iranian higher education system in that its renowned quality of education and research makes it the top destination of choice for high school leavers as well as those who wish to pursue postgraduate study. Since the inception of the Graduate School of Economics and Management in 1999, together with the university's drive to foster entrepreneurship, Sharif has also become a hub for management education. Many of its top graduates, and indeed those of other reputable universities, choose to pursue postgraduate degrees in management with a view to establishing knowledge-based startups and other new businesses.

Furthermore, Sharif contributes considerably to the coun-

try's higher education through its doctoral graduates who are the prime candidates for faculty positions at top universities across the country. Of the 2000 PhD graduates, some seventy percent are currently faculty members of other universities in Iran. A degree from Sharif is, thus, widely regarded as a passport to great job prospects in industry and commerce, academia, and indeed, the civil service.

Joint degree programs with top international institutions, and numerous other educational and research collaborations with our international partners testify to Sharif's internationally recognized academic rigor. The four-year plan for the strengthening of the university's research activities revolves around internationalization and the knowledge-value chain whereby education combined with research leads to technology development, which, in turn, leads to the commercialization of products.

Our journey is now taking us beyond research and we are combining our greatest assets, rigorous education and cutting edge research, to promote entrepreneurship. I am pleased to say that Sharif has the highest number of collaborations with industry in the country. This is very important for us, not just for financial reasons, but because the very reason that this university was founded fifty years ago was

to help in the development of the country. If you look at the leaders in industry, both public and private, businesses, and even politics, you will find that a great many number are alumni of Sharif University. Therefore, we aim to train not just academically brilliant people, but also thinkers, those who can solve problems and drive the country forward.

Our motto; "Transforming the country's best into the world's best" can only be solidly reflective of our institution if we continue to output excellence not only during periods of slow change in science and technology, but also at times where knowledge, science and technology go through rapid and dramatic changes. Given its persistence in the pursuit of academic excellence, and its commitment to shaping a safer, better world, Sharif University strives to become a significant contributor to society, locally and internationally. As such, we will continue to engage effectively with our international partners to ensure that we play an important role in the global academic dialogue. I have no doubt that we can work together to promote world peace through cultural and academic discourse.

Mahmud Fotuhi Firuzabad, Ph.D.

President of Sharif University of Technology

Facts and Figures

- Founded in 1965
- Ranked 1st in the country (QS, since 2014)
- Ranked 48th for citation per faculty in the world
- Ranked 1st in training the most employable graduates in the country
- Ranked 38th in terms of collaboration with industry in the world
- Attracts 95% of top high school leavers
- 12,000 Students: 50% undergraduates and 50% Masters' and PhD students
- 30% of the students are female
- Over 40,000 Alumni
- 468 Faculty Members:
 - 38% Professors
 - 36% Assistant Professors
 - 22% Associate Professors
 - 4% Lecturers
- International campus on Kish Island



Golden Body of

Distinguished Alumni

Maryam Mirzakhani

Fields Medalist
Class of 1998



Alinaghi Mashayekhi

Founder of Sharif's GSME
Class of 1970



Ali Larijani

The Speaker of Iran's
Parliament
Class of 1980



Eshaq Jahangiri

First Vice President of Iran
Class of 1993



I



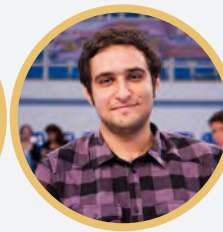
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III



IV



V



VI

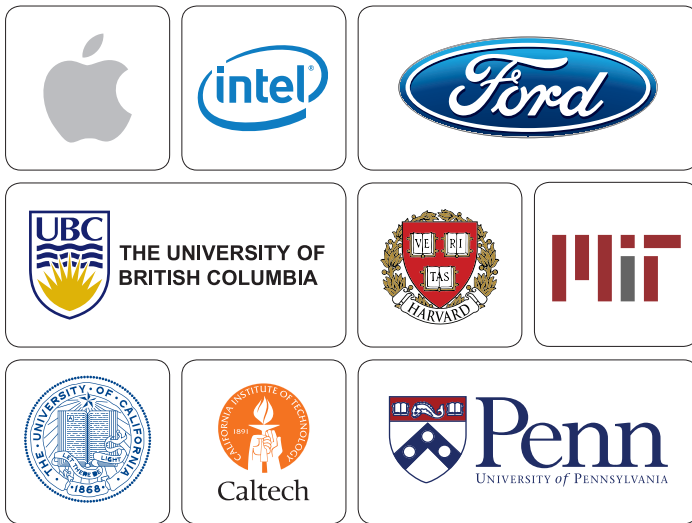
Over 2000 Sharif alumni serve as CEOs

Top international Destination:

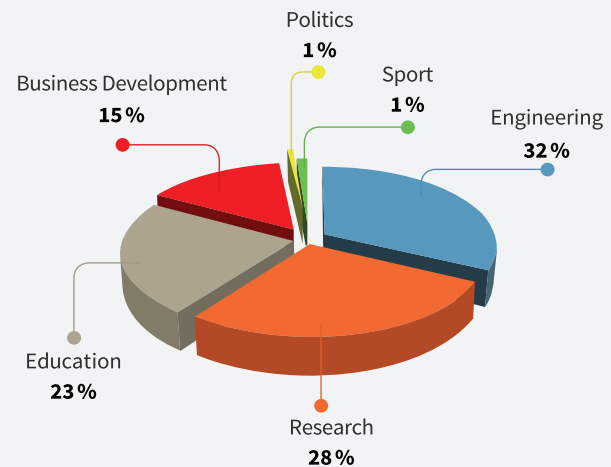


Alumni

and executive managers worldwide



- ◆ Ranked 1st in producing most employable graduates in the country
- ◆ More than 2200 BSc, MSc, and PhD graduates from 13 departments each year
- ◆ The first woman to win the Fields Medal was a Sharif Alumnus, Prof. Maryam Mirzakhani



- I Masoud Nili ► Presidential economic advisor and minister of state for economic affairs
- II Sorena Sattari ► Vice President for Science and Technology
- III Ali Jadbabaie ► Network scientist & Professor at MIT
- IV Ali Daei ► Iranian former footballer
- V Elshan Moradiabadi ► Chess grandmaster
- VI Adel Ferdosipour ► Sport Commentator



Engineering Department

Email: info@sharif.edu

Website: <http://ae.sharif.edu/>

Address: Department of Aerospace Engineering, Sharif University of Technology, P.O. Box 11156-3516, Tehran, Iran.

Telephone number: +98 21 6616 4601

Department of Aerospace Engineering at SUT is nationally known for teaching and research that address both challenges and opportunities facing the aerospace profession. The goal of the department is to provide students with an understanding of basic principles, including mathematics, physics and aerospace and develop their ability to analyze, model, build, measure, design and implement solutions

throughout a broad spectrum of engineering fields. Students are taught to understand product development and manufacturing processes and are encouraged to work effectively in a multidisciplinary team environment.

Undergraduate Course Structure

1st year	2nd year	3rd year	4th year
<ul style="list-style-type: none">• Math.• Physics• Introduction To Aerospace Engineering• Statics• Engineering Graphics• Computer Programming	<ul style="list-style-type: none">• Dynamics• Strength Of Materials (I)• Thermodynamics (I)• Aerodynamics (I)• Fluid Mechanics (I)• Orbital Mechanics	<ul style="list-style-type: none">• Vibrations• Heat Transfer (I)• Thermodynamics (II)• Aerodynamics (II)• A/C Structural Analysis• Automatic Control• Propulsion Principle• Flight Dynamics (I)	<ul style="list-style-type: none">• Flight Dynamics (II)• Aircraft Design (I)• Materials & Construction Methods• Three advanced courses with a choice from a wide variety of options• Research under the supervision of a member of the academic staff

Graduate Program

In accordance with the requirements of the graduate office at SUT, this department offers M.Sc. and Ph.D. degrees in advanced areas of aerospace engineering, including the following topics of research:

- Aerodynamics
- Aero-Acoustics
- Computational Fluid Dynamics (CFD)
- Combustion
- Propulsion

- Aerospace Structures
- Aerospace Design
- Space Engineering
- Flight Dynamics and Control
- Optimization

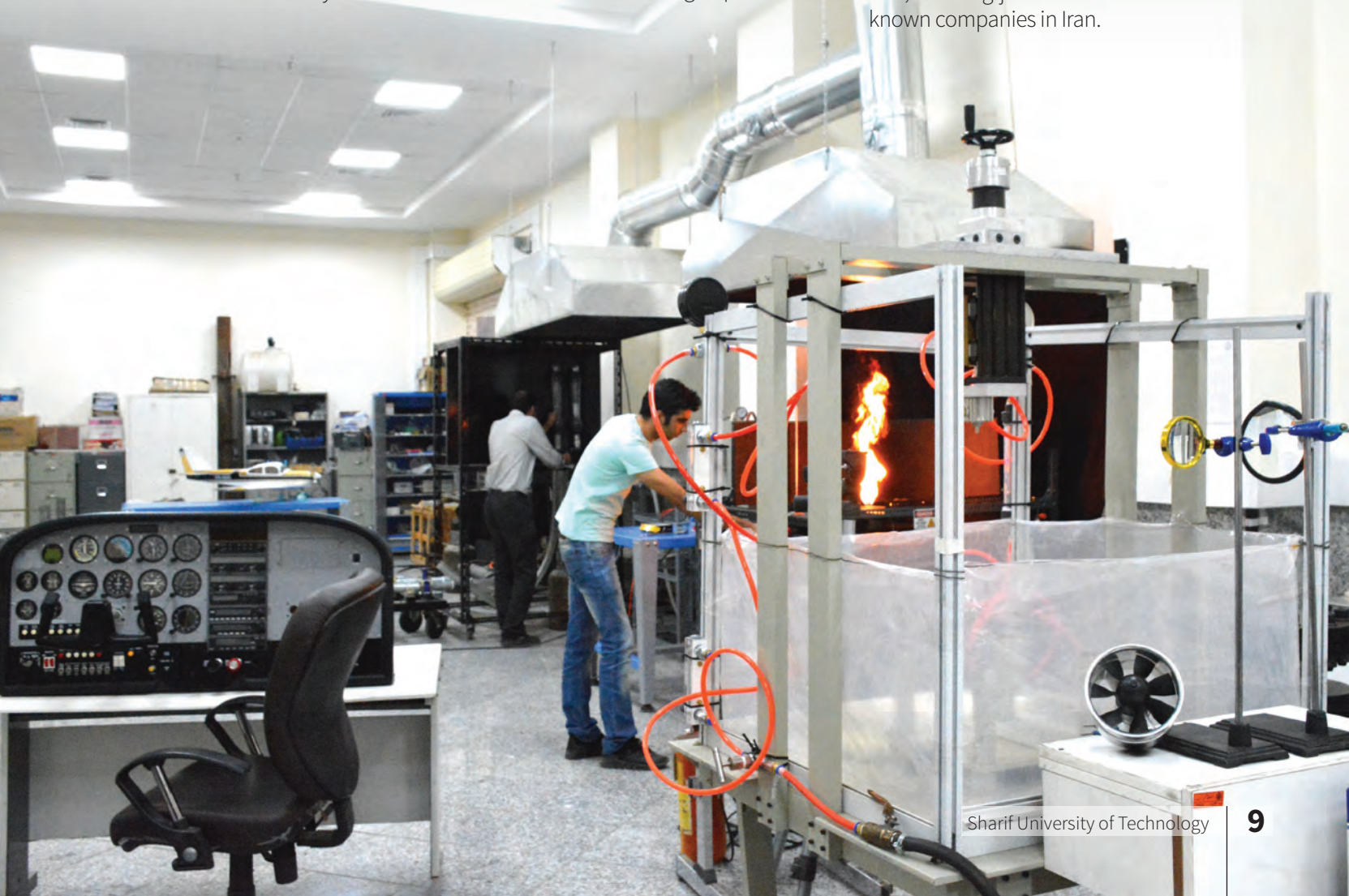
Research Facilities

- Aerodynamics Laboratory
- CFD/ Parallel Computing Laboratory
- Instrumentation Laboratory
- Combustion Laboratory

- Control Laboratory
- Structures Laboratory
- Jet and Piston Engines Workshop
- Model Airplane Workshop
- Composite Materials Laboratory
- Mechanics of Smart Materials Laboratory
- Fast Computing Laboratory (HPCL)
- Remote Access Lab
- Laboratory of hydrodynamic calculations and design optimization

Career Opportunities Aerospace

A Sharif degree will fast-track one's career, enabling one to go further more quickly. Aerospace graduates are sought after by top employers in industry and commerce, government organizations and academia. 74% of aerospace graduates are in relevant employment or further study within six months of graduation, securing jobs in some of the best known companies in Iran.



Chemical and Petroleum

Engineering Department

Email: info@sharif.edu

Website: <http://che.sharif.edu/>

Address: Chemical and Petroleum Engineering Department,
Sharif University of Technology, P.O. Box: 11155-9465, Tehran, Iran.

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Chemical engineering concerns the design, scale-up, and operation of chemical processes, and understanding and design of technologically useful materials. Petroleum engineering works on the design and development of optimized methods for producing oil and gas from deposits below the Earth's surface (hydrocarbon reservoirs). Exploration, drilling, reservoir and production engineering are the major fields of the

upstream sector of the oil and gas industry. The Chemical & Petroleum Engineering Department provides the best to prepare and educate each student to be a leader and problem-solver for industry, academia, or the public sector.

Undergraduate Course Structure

Chemical Engineering			
1st year	2nd year	3rd year	4th year
<ul style="list-style-type: none">• Math. (I), (II)• Physics (I), (II)• Chemistry (I), (II)• Computer Programming• Mass and Energy Balance	<ul style="list-style-type: none">• Diff. Equations• Organic Chemistry• Fluid Mechanics (I), (II)• Chemical Eng. Thermodynamics (I), (II)• Heat Transfer I• Statics and Mechanics of Materials• Chemical Eng. Physical Chemistry• Eng. Math	<ul style="list-style-type: none">• Applied Heat Transfer• Mass Transfer Operations• Analytical Chemistry• Numerical Analysis• Principles of Electrical Engineering• Kinetics and Reactor Design• Unit Operations I• Applied Math. in Chemical Eng.	<ul style="list-style-type: none">• Unit Operations II• Process Control• Process Design and Economics• BSc project



Petroleum Engineering			
1st year	2nd year	3rd year	4th year
<ul style="list-style-type: none"> • Math. (I), (II) • Physics (I), (II) • Chemistry I • Computer Programming • Petroleum Chemistry • General Geology • Mass and Energy Balance 	<ul style="list-style-type: none"> • Diff. Equations • Chemical Eng. Thermodynamics (I), (II) • Statics and Mechanics of Materials • Structural Geology • Eng. Math • Transport Phenomena I • Petroleum Geology 	<ul style="list-style-type: none"> • Numerical Analysis • Reservoir Engineering (I), (II) • Principles of Electrical Engineering • Transport Phenomena II • Drilling Engineering I • Well Logging • Production Engineering I 	<ul style="list-style-type: none"> • Well Testing • Drilling Engineering II • Production Engineering II • Geophysics • Reservoir Simulation • Reservoir Management • BSc project

Graduate Program

The department offers a comprehensive program for both M.Sc. and Ph.D. degrees in advanced areas of chemical and petroleum engineering. All M.Sc. students must complete a minimum of 31 units, which include a research project of 6 units as their thesis. Ph.D. students are required to complete a minimum of 15 semester credits beyond the M.Sc. degree. Candidates must pass the qualifying exam and prepare a comprehensive Ph.D. thesis.

- Process Design
- Thermo-kinetics, Catalyst, and Reactor Design
- Transport Phenomena and Separation Processes

Petroleum Engineering

- Reservoir Engineering
- Production Engineering
- Drilling Engineering
- Exploration Engineering (future plan)

Graduate Research Fields

Chemical Engineering

- Biochemical Engineering and Biotechnology
- Biomedical Engineering
- Environmental Engineering
- Food Industry Engineering
- Petroleum Engineering
- Polymer Engineering
- Process Control and Simulation

Career Opportunities Chemical Engineering

Chemical Engineers may use their expertise in a wide range of industrial plants. Wherever a chemical process is taking place on a large scale, a Chemical Engineer needs to be present to oversee the process. Design and development of such processes and plants is also their duty. Nowadays and with all the new technologies, Chemical Engineers are needed more and more in multidisciplinary fields like Biomedical Engineering and Nanotechnology.

Career Opportunities Petroleum Engineering

Exploration by earth scientists and petroleum engineers is the oil and gas industry's main subsurface discipline, which focuses on maximizing the economic recovery of hydrocarbons from subsurface reservoirs. The com-

bined efforts of geologists and petroleum engineers throughout the life of a hydrocarbon accumulation determine the way in which a reservoir is developed and depleted. This, of course, has important economic implications.



Chemistry

Department

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Website: <http://ch.sharif.edu/>

Address: Chemistry Department, Sharif University of Technology, P.O. Box 11156-3516, Tehran, Iran.

Telephone number: +98 21 6616 5301-2

Sharif has one of the leading chemistry departments in the country with a state of the art laboratories, and international- level research in a wide range of areas, including synthesis and catalysis, medicinal and biological chemistry, structural chemistry, organometallic chemistry, sustainable energy, chemo-metric studies, environmental analytical chem-

istry, electrochemistry, advanced materials, polymer and composite chemistry, innovative measurement and theoretical and computational chemistry. The department has an unrivalled track record in commercializing the innovative work of research staff, which has raised millions for the University.

Undergraduate Course Structure

Course Structure (Pure Chemistry)

1st year	2nd year	3rd year	4th year
<ul style="list-style-type: none">• General Chemistry (I), (II)• General Chemistry Lab (I), (II)• Math. (I), (II)• Physics (I), (II)• Physics Lab (I), (II)• General Workshop• Chemistry Language	<ul style="list-style-type: none">• Inorganic Chemistry (I), (II)• Physical Chemistry (I), (II)• Analytical Chemistry (I), (II)• Organic Chemistry (I), (II)• Chemistry Language• Related Lab Courses• How to Use Chemistry• References and Databanks• Differential Equations	<ul style="list-style-type: none">• Organic Chemistry (III)• Instrumental Analytical Chemistry• Principles of Quantum Chemistry• Organometallic Chemistry• Qualitative Organic Chemistry Lab.• Principle of Chemical Industry• Chemistry Language• Computer Programming• Spectroscopic Characterization of Organic Compounds	<ul style="list-style-type: none">• Biochemistry• Physical Organic Chemistry• Molecular Spectroscopy• Research Project• Instrumental Analytical Chemistry Lab.



Course Structure (Applied Chemistry)

1st year	2nd year	3rd year	4th year
<ul style="list-style-type: none"> • General Chemistry (I), (II) • General Chemistry Lab (I), (II) • Math. (I), (II) • Physics (I), (II) • Physics Lab (I), (II) • General Workshop • Chemistry Language 	<ul style="list-style-type: none"> • Inorganic Chemistry (I), (II) • Physical Chemistry (I), (II) • Analytical Chemistry (I), (II) • Organic Chemistry (I), (II) • Chemistry Language • Related Lab Courses • How to Use Chemistry References and Databanks • Differential Equations • Industrial Chemistry (I) 	<ul style="list-style-type: none"> • Organic Chemistry (III) • Instrumental Analytical Chemistry • Principles of Quantum Chemistry • Organometallic Chemistry • Qualitative Organic Chemistry Lab. • Principle of Chemical Industry • Chemistry Language • Computer Programming • Spectroscopic Characterization of Organic Compounds 	<ul style="list-style-type: none"> • Industrial Chemistry (II) • Industrial Chemistry Calculations • Water and Wastewater Treatment • Corrosion Technology • Research Project • Industrial Chemistry Lab

Graduate Program

Graduate degrees are offered in four areas of Chemistry

- Inorganic Chemistry, MSc, PhD
- Analytical Chemistry, MSc, PhD
- Organic Chemistry, MSc, PhD
- Theoretical and Computational Chemistry, MSc, PhD
- Physical Chemistry, MSc, PhD

Graduate Research Fields:

- Synthesis and Catalytic reaction of the new metal-organic complexes
- Environmental Analytical Chemistry
- Polymer Chemistry
- Natural Products extraction
- New synthetic methodology in Organic Chemistry
- Chemo metric study and Statistical Chemistry
- Electrochemistry and Electrochemical methods
- Crystallography and Structural Inorganic Chemistry
- Synthesis and physicochemical study of the organometallic complexes

- Thermodynamics and Molecular Modeling
- Protein-Ligand interactions, protein folding and unfolding studies
- Computational Chemistry
- Organic synthesis under solvent-free conditions and in water as solvent
- Conceptual foundations of physics and chemistry, Quantum theory, Statistical physics, Thermodynamics, Information theory
- Design, fabrication and application of electrochemical sensors
- Dynamic NMR spectroscopy (DNMR), Structure elucidation of saccharides

Career Opportunities Chemistry

Chemistry provides an excellent opportunity for the development of the critical faculties and intellect, and also instills important transferable skills that will serve graduates well whatever their subsequent choice of career may be. Many of our Chemistry graduates go on to do research or further study. Others enter professions in industry, publishing and marketing.





Engineering Department

Email: info@sharif.edu

Website: <http://civil.sharif.edu/>

Address: Civil Engineering Department, Sharif University of Technology, P.O. Box 145888-9694, Tehran, Iran.

Telephone number: +98 21 6616 4201

The Department of Civil Engineering at Sharif University of Technology was established in 1972. For the first ten years, both the graduate and undergraduate programs emphasized on structural engineering. Since 1982, the research programs as well as the graduate and undergraduate courses have been extended to other fields of civil engineering. At the present time, the Department of Civil Engineering has 40 full

time faculty members, more than 600 graduate and 500 undergraduate students. It has eight areas of concentration: Structural Engineering, Water Resources and Environmental Engineering, Geotechnical Engineering, Highway and Pavement Design, Transportation, Earthquake Engineering, Hydraulic Structures and Construction Management.

Undergraduate Course Structure

1st year	2nd year	3rd year	4th year
<ul style="list-style-type: none">• Math. (I), (II)• Physics (I), (II)• Physics Lab• General Chemistry• General Chemistry Lab• Statics• Technical Drawing• Workshop	<ul style="list-style-type: none">• Statistics and Probability in Civil Engineering• Dynamics• Mechanics of Materials (I)• Diff. Equations• Computer Programming• Engineering Geology• Engineering Hydrology• Fluid Mechanics• Structural Analysis (I)• Construction Materials & Concrete Technology• Mechanics of Materials Lab• Architecture Design• Numerical Analysis	<ul style="list-style-type: none">• Hydraulics• Hydraulics Lab• Steel Design (I), (II)• Design of Concrete Structures (I), (II)• Structural Analysis (II)• Loading Principles• Soil Mechanics• Soil Mechanics Lab• Environmental Engineering• Traffic and Highway Engineering• Foundation Engineering	<ul style="list-style-type: none">• Steel Structures Project• Reinforced Concrete Project• Road Construction• Construction Equipment and Methods• Water Supply and Sewerage• Internship• Highway Design Project• Project and Construction Management

Graduate Program

In accordance with the requirements of the Graduate School at SUT, M.Sc. and Ph.D. degrees in Civil Engineering are offered in the following areas:

- Earthquake Engineering
- Environmental and Sanitation Engineering
- Construction Engineering and Management (M.Sc. only)
- Geotechnical Engineering
- Highway Engineering
- Hydraulics and Water Resources Engineering
- Structural Engineering
- Transportation Engineering and planning

Graduate Research Fields and Facilities

The Civil Engineering Department laboratories include:

- Solids (Strength of Materials) Lab
- Concrete Lab
- Hydraulics Lab
- Shaking Table
- Strong Floor Lab
- Pavement Lab
- Transportation and Computer-Aided Design
- Soil Mechanics Lab

- Surveying Workshop
- Universal Device

Research Centers

- 1- Transportation Engineering Research Center
- 2- Earthquake Engineering Research Center
- 3- Parallel Processing Center

Career Opportunities Civil Engineering

Upon completion of their undergraduate programs, Civil engineers will be able to participate in design, calculation, construction and management of projects such as buildings, bridges, tunnels, rigs, platforms, sea and coastal structures, ground and air tanks. Planning and constructing highways, programming transportation and traffic, building urban water supply networks for purification and provision of drinking water, collecting surface water and sewage, enhancing environmental health, constructing seaports and airports, planning dams and networks of transporting and storing water are among other possibilities for the Civil engineers.



Computer

Engineering Department

Email: info@sharif.edu

Website: <http://ce.sharif.edu/>

Address: Department of Computer Engineering, Sharif University of Technology, P.O. Box 11155-9517, Tehran, Iran.

Telephone number: +98 21 6616 6600

In 1985, the first independent Department of Computer Engineering in the country was established at Sharif University of Technology. Initial undergraduate programs were “Software” and “Hardware” majors. Corresponding masters programs were initiated in 1987. The portfolio was later expanded by the PhD program in 1997. MSc in Artificial Intelligence, BSc and MSc in Information Technology were added in 1998 and 2002

respectively. In 2016, the department unified all its undergraduate majors under BSc in Computer Engineering. The department boasts several Gold Medals in regional ACM ICPC programming contests, RoboCup Robots Soccer World Championships, and establishing national initiatives such as FPGA design contests and AI Challenge among others. The department is famous for its large-scale industrial projects in addition to excellence in research.

Undergraduate Course Structure

1st year	2nd year	3rd year	4th year
<ul style="list-style-type: none">• Math. (I), (II)• Physics (I), (II)• Discrete Structures• English Language• Digital Design• General Workshop• Computer Workshop• Physics (II) LAB• Computer Programming	<ul style="list-style-type: none">• Data Structures and Algorithms• Engineering Math. or Linear Algebra• Technical Presentation• Digital Design LAB• Fundamentals of Electrical and Electronic circuits• Computer Architecture• Probability & Statistics• Advanced Programming• English Language for Computer Engineers• Diff. Equations• Computer Structure and Language	<ul style="list-style-type: none">• Operating Systems• Compiler Design• Digital System Design• Digital System Design LAB• Database Systems• Computer Networks• Computer Networks LAB• Artificial Intelligence• Computer Architecture LAB• System Design and Analysis• Three courses from Group I	<ul style="list-style-type: none">• Data and Network Security• Operating Systems LAB• BSc project• Internship• Four courses from Group I• Four courses from Group II



Group I: Advanced and Specialist Courses

Object Oriented Programming, Signals and Systems, Real-Time Systems, Design of Algorithms, Software Engineering, Computer Simulation, Advanced information retrieval, Microprocessors, VLSI Design, Data Communication, Information Technology and Ethics, Theory of Machines and Languages, Design of Programming Languages, Information Technology Project Management

Group II: Elective Courses

Numerical Computation, Digital Electronics, Computer Measurement and Control, Hardware description languages, Electronics, Advanced Digital Design, Linear Feedback Control, VLSI LAB, Microprocessors LAB, Digital Electronics LAB, E-Commerce, Application Engineering, Strategic Management and Planning, Multimedia Systems, 3D Computer Vision, Advanced Topics in Software Engineering, Software Engineering LAB, Computer Graphics, Web Programming, Theory of Computation, Agile Software Development, Advanced Topics in Hardware Engineering, Industrial Automation LAB

Graduate Programs

M.Sc.

- Software Engineering
- Computer Architecture
- Artificial Intelligence and Robotics
- Computer Networks
- Secure Computing
- Algorithms and Computation
- Bioinformatics

Ph.D.

- Computer Engineering

Graduate Research Fields and Facilities

To facilitate in-depth practical study of different aspects of computer engineering, several educational laboratories are devoted to providing hands-on laboratory experience to undergraduate and graduate students. A number of these laboratories are listed below:

- Algorithms and Combinatorics
- Architectural Support for Emerging Technologies
- Bioinformatics
- Circuit and VLSI Design
- Cloud and Green Computing
- Computer Vision, Graphics, and Visualization
- Database Systems
- Dependability and Fault-Tolerant Systems
- Distributed and Pervasive Computing
- Electronic Design Automation and HW/SW Co-design
- Embedded and Real-time Systems
- Energy and Environment-Aware Systems
- Hardware Security
- High Performance Computing and Parallel Processing
- Human-Computer Interaction (HCI)
- Image and Video Processing

- Information Retrieval
- Low-Power Design
- Machine Learning
- Memory Systems
- Micro-Architecture and Multicore Processors
- Natural Language Processing (NLP)
- NoC, SoC, and Interconnection Networks
- Programming Languages and Compilers
- Reconfigurable Computing
- Security, Privacy and Cryptography
- Smart Buildings (Cyber Physical Systems)
- Speech and Audio Processing
- Storage, SSD, NVMS, and I/O systems
- Systems and Networking

Career Opportunities

Graduates of the department are capable of identifying and analyzing

the present day computer systems around the world, so that they can come up with strategies to better deploy, maintain, troubleshoot, upgrade, and improve the efficiency of systems of this kind. They are equipped with the necessary knowledge and tools to propose innovative methods to improve the existing solutions for new challenges. The graduates of the department are highly employable, and perhaps more importantly, have co-founded some of the most successful startups of the country.



Electrical

Engineering Department

Email: info@sharif.edu

Website: <http://ee.sharif.edu/>

Address: Department of Electrical Engineering, Sharif University of Technology, P.O. Box: 11155-8639, Tehran, Iran.

Telephone number: +98 21 6616 5941

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

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

• Center of Excellence in Information Security and Cryptography

Director: Mohammad Reza Aref
Email: aref@sharif.edu
Website: www.ceisc.ee.sharif.edu

• Center of Excellence for Power System Management & Control

Director: Mehdi Ehsan,
Email: 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.





Engineering Department

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Website: <http://energy.sharif.edu/>

Address: Department of Energy Engineering, Sharif University of Technology, P.O. Box: 11155-8639, Tehran, Iran.

Telephone number: +98 21 6616 6101-2

The plan of establishment of the Department of Energy Engineering was proposed and subsequently approved by SUT Graduate Council and University Council in 2005. The plan was finally approved by the Ministry of Science, Research and Technology in late 2005. Board of Trustees of SUT approved the organization chart of the department in 2006.

Department of Energy Engineering is a multidisciplinary department with activities in the following fields:

- Energy Systems Engineering
- Energy Technologies
- Energy & Environment
- Nuclear Engineering

Graduate Program

The Department of Energy Engineering currently operates at graduate level and offers M.Sc. and Ph.D. degrees in the following disciplines:

- **M.Sc. in Energy Systems Engineering in the following research fields:**

- 1- Energy Systems Engineering
- 2- Energy Technologies
- 3- Energy and Environment

- **M.Sc. in Nuclear Engineering in following research fields:**

- 1- Reactor Engineering
- 2- Nuclear Fuel Cycle
- 3- Applications of Radiation and Radioisotopes
- 4- Bio-radiation Engineering

- Ph.D. in Energy Systems Engineering
- Ph.D. in Nuclear Energy Engineering

Graduate Research Fields and Facilities

The Department of Energy Engineering and Sharif Energy Research Institute (SERI) have close cooperation to better use the existing synergy between two institutions and to improve the quality of educational and research activities. The department

also has close cooperation with different departments at Sharif, including, Electrical Engineering, Mechanical Engineering, Chemical Engineering and Physics.





Industrial

Engineering Department

Email: info@sharif.edu

Website: <http://ie.sharif.ir/>

Address: Department of Industrial Engineering, Sharif University of Technology, Azadi Ave., Tehran, Iran

Telephone number: +98 21 66165701

The Department of Industrial Engineering at Sharif University of Technology was founded in 1968 and enjoys the distinction of being the first department of its type established in Iran. The goal of this department is to produce efficient industrial engineers with a high rate of technical ability, including practical as well as theoretical knowledge, in order to attain secure and responsible positions in competitive arena of industrial and service enterprise.

Undergraduate Course Structure

1st year	2nd year	3rd year	4th year
<ul style="list-style-type: none">• Math (I), (II)• Physics (I), (II)• Physics Lab (I), (II)• English Language• Computer Programming• Computer Lab• Machine Tools Workshop (I)• Statics• Specialized English Language• Industrial Drawing (I)	<ul style="list-style-type: none">• Theory of Probabilities and Its Application• Linear Algebra• General Economics (I), (II)• Differential Equation• Industrial Drawing (II)• Engineering Economy• Engineering Statistics• Operation Research (I)• Material Science• Fundamentals of Electrical Engineering	<ul style="list-style-type: none">• Inventory Control (I)• Work Measurement• Production Methods (I)• Management• Accounting• Computer Information Systems• Quality Control• Facility Layout & Location• Project Control	<ul style="list-style-type: none">• Full-time research under the supervision of a member of the academic staff• Optional supplementary subject course• Management Information System (MIS)• Operation Research (II)

Graduate Programs

The programs offered in the department at graduate level are:

1. Master of Science in Industrial

Engineering (with the final project determining the field of study)

2. Ph.D. in Industrial Engineering program

Career Opportunities industrial engineering

Industrial engineering doctoral graduates are among the best in the country, prepared to go into both industry and academic positions. They have become involved in rigorous coursework, teaching, and research in areas such as graph theory, queuing theory, stochastic processes, stochastic programming, optimization, dynamic

pricing and programming, financial engineering, supply chain management, and algorithmic trading. Over the past few years the graduates have pursued careers as faculty members of national and international universities, leader and management positions in Banks, Transports, Oil and gas and other industry sectors.





Management & Economics

Graduate School

Email: info@sharif.edu

Website: <http://management.sharif.edu/>

Address: Graduate School of Management and Economics, Sharif University of Technology, Shahid Taimouri St., Azadi Ave., P.O. Box 11156-3516, Tehran, Iran. Telephone

Telephone number: +98 21 6616 5850

The Graduate School of Management and Economics (GSME) at Sharif University of Technology was established in 1999 with the aim of identifying and educating top students who are interested in continuing their studies in the fields of management and economics. We aim to see our graduates as high quality researchers, analysts, executives, and advisors in public and private sector organizations. Our faculty includes gradu-

ates from top universities around the world including MIT, Columbia, and LSE just as examples.

This school is comprised of two different departments:

- The Management Department
- The Economics Department

Graduate Program

MBA Program

The MBA program is a two-year full-time program. The knowledge that students obtain in this program, enables them to develop their careers in the field of management and extend their personal and professional networks. Currently, the main employers of our MBA graduates are the leading private and public companies in Iran.

Master of Science in Management

This is a compact two-year program that provides an advanced-level conceptual foundation. It differs from an MBA program; The primary goal of the M.Sc. program is to prepare students for entry into the leading PhD programs. Some students also choose to go into consultancy and research careers.

Master of Science in Economics

The Master of Economics provides advanced training in theoretical and applied aspects of modern economics, econometrics and financial economics. The Master of Science in economics is designed for those who wish to become professional economists in the public or private sectors.

Ph.D. Programs

Graduates of this program will enjoy the skills and expertise to make a significant contribution to academia. We offer both PhD in Management and PhD in Economics, where the curriculum includes a series of challenging courses, research opportunities, and the preparation and defense of a dissertation on an original topic.

Past Projects

- Industrial Development Strategy for Iran
- Optimum Government Size to Achieve Maximum Economic Growth
- Economics and ICT Market of Iran
- Assessing Real Estate Financial Subsidies

- 
- Role and Responsibilities of Industrial Parks
 - Technology Development Strategy for Power Sector
 - Supply Chain Management and Logistics for Iran Grain Organization
 - Organizational Self-assessment Projects
 - Organizational Customer Relationship Management (CRM) Projects

Seminars and Workshops

Academic seminars and workshops for students and practitioners are held regularly where renowned professors from faculties around the country and the world, including Iranian graduates of top universities abroad, are invited to lecture. The list of past events is accessible through the website.

Mathematical Sciences

Department

Email: info@sharif.edu

Website: <http://mathsci.sharif.ir/>

Address: Department of Mathematical Sciences, Sharif University of Technology, P.O. Box 11155-9415, Tehran, Iran.

Telephone number: +98 21 6616 5601-2

The Department currently offers B.Sc., M.Sc. and Ph.D. degrees in both pure/theoretical and applied/industrial mathematics, as well as in computer science. The Department of Mathematical Sciences was one of the first institutes in Iran to initiate Ph.D. programs (starting around 1988) and has since been a leader in terms of its scientific profile and activity records of its faculty members. Since its inception, around

1773 B.Sc. students, 885 M.Sc. students and 84 Ph.D. students have graduated from the department, many of whom have gone on to lead successful academic and professional careers in different national and international institutions. The first woman to win the Fields medal in Mathematics, Prof. Maryam Mirzakhani, graduated from this department.

Undergraduate Course Structure

1) B.Sc. in Mathematics

After the first two academic years, every student in this program is entitled to select one of these two branches to pursue a Bachelor's degree:

- Pure/Theoretical Mathematics
- Applied/Industrial Mathematics

2) Computer Science

Mathematics – Pure/Theoretical

1st year	2nd year	3rd & 4th year
<ul style="list-style-type: none">• Calculus (I), (II)• Physics (I), (II)• Computer Programming• Advanced Programming• Discrete Mathematics• General workshop	<ul style="list-style-type: none">• Differential Equations• Linear Algebra I• Probability and its Applications• Mathematical Analysis I• Numerical Analysis I• Algebra I• One elective course	<ul style="list-style-type: none">• Mathematical Analysis II• Topology I• Elective courses from Mathematical Analysis, Numerical Analysis and Optimization, Probability and Statistics, Combinatorics and Graph, Algebra and Number Theory, Differential Equations and Dynamical Systems, Logic and Set Theory, Geometry and Topology• Optional Courses from Economics and Management, and from other departments of the university



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Mathematics - Applied/Industrial

1st year	2nd year	3rd & 4th year
<ul style="list-style-type: none"> • Calculus (I), (II) • Physics (I), (II) • Computer Programming • Advanced Programming • Discrete Mathematics • General workshop 	<ul style="list-style-type: none"> • Differential Equations • Linear Algebra I • Probability and its Applications • Mathematical Analysis I • Numerical Analysis I • Algebra I • Operational Research I • Two elective courses from Economics and Management 	<ul style="list-style-type: none"> • Numerical Analysis II • Statistics and its Applications • Stochastic Processes • Regression Analysis • Elective and optional courses including B.Sc. project from the specialization field, Economics and Management, and from the other departments of the university

Computer Science

1st year	2nd year	3rd year	4th year
<ul style="list-style-type: none"> • Calculus (I), (II) • Physics (I), (II) • Computer Programming • Advanced Programming • Discrete Mathematics • General workshop 	<ul style="list-style-type: none"> • Differential Equations • Linear Algebra I • Probability and its Applications • Mathematical Analysis I • Data Structures • Analysis of Algorithms • Operating Systems I • Computer Organization and Design • One elective course 	<ul style="list-style-type: none"> • Statistics and its Applications • Mathematical Logic • Automata and Formal Languages • Algebra I • Numerical Analysis I • Three elective courses 	<ul style="list-style-type: none"> • Elective and optional courses including B.Sc. project from the specialization field, Economics and Management, and from the other departments of the university

Graduate Programs

M.Sc. Programs

- Pure Mathematics
- Applied Mathematics
- Computer Science

Ph.D. Programs

Ph.D. degrees are also offered in both Mathematics and Computer Science, and Ph.D. students may work on any area of interest offered by the department.

Educational Videos

Videos of many courses offered by the Department of Mathematical Sciences are available at:
<http://videos.math.sharif.ir/>

Career Opportunities Mathematical Sciences

Students holding a degree in Mathematical Sciences pursue a wide range of careers after graduation. Graduate

schools in mathematics, physics, computer science, finance, or engineering are among their options. Some begin careers in investment banking, consulting, or software engineering.



Mechanical

Engineering Department

Email: info@sharif.edu

Website: <http://mech.sharif.edu/>

Address: Department of Mechanical Engineering, Sharif University of Technology, P. O. Box 11155-9567, Tehran, Iran.

Telephone number: +98 21 6616 5501

The Department has an excellent reputation nationally and internationally and is consistently ranked the top undergraduate mechanical engineering program nationwide and the first choice of undergraduate and graduate candidates in the national entrance exam. The mission of the Department is to provide an excellent educational experience in mechanical engineering.

Undergraduate Course Structure

1st year	2nd year	3rd year	4th year
<ul style="list-style-type: none">• Math (I), (II)• Physics (I), (II)• Physics Lab (I), (II)• General English• Physical Education (I)• Machinery Tool Workshop• Engineering Graphics (I), (II)• General Chemistry• Statics• Welding & Sheet Metals Workshop	<ul style="list-style-type: none">• Diff. Equations• Materials Science• Strength of Materials (I), (II)• Dynamics• Computer Programming• Physical Education (II)• Engineering Math.• Numerical Computations• Thermodynamics (I)• Fluid Mechanics (I)• Machine Element Design (I)	<ul style="list-style-type: none">• Thermodynamics (II)• Fluid Mechanics (II)• Fundamentals of Electrical Engineering (I)• Vibrations• Machine Element Design (II)• Strength of Materials Lab• Heat Transfer (I)• Automatic Control• Thermodynamics Lab• Fluid Mechanics Lab• Dynamics of Machinery• Fundamentals of Electrical Engineering (II)• One elective course	<ul style="list-style-type: none">• Auto Mechanics Workshop• Heat Transfer (II)• Dynamics & Vibration Lab• Fundamentals of Electrical Engineering Lab• Measurement & Control Systems• BSc Project• Five elective courses



Graduate Program

At MSc level, there are six options available to prospective students:

- Applied Mechanics,
- Production and Manufacturing
- Biomechanics
- Energy Conversion
- Marine Engineering
- Mechatronics

At PhD level, the department offers three options:

- Applied Mechanics
- Energy Conversion
- Marine Engineering

Graduate Research Fields

A broad range of research opportunities exists within the Department of Mechanical Engineering. Current fields of research are outlined below:

- Design and Fabrication of Micro- and Nanostructures
- Kinematics and Dynamics
- Condition Monitoring
- Energy Resources
- Nonlinear Sciences and Many-Body Systems
- Gas Turbine
- Turbocharger and Turbocharging
- The Internal Combustion Engines
- New Energy Conversion Systems
- Analytical and Computational Modeling of Nonlinear Continuum, Nano and Multi-Scale Structures
- Marine Engineering
- Intelligent Systems

- Manufacturing Process
- Fluxes Dynamics and Process Integration
- Surgical Robotics and Orthopedic Equipment
- Failure Analysis and Improvement
- Fluid Dynamics
- Energy Conversion and Power Generators
- Robotic Systems and Mechatronics
- Mechanics of Composite and FG Materials
- Two-Phase Flows
- Motion-Sport
- Biomechanics
- System Design and Automation
- Micro- and Nano-fluids
- Design and Analysis of Cable-Driven Robots
- Spine Biomechanics
- Fuel, Combustion and Emission
- Nano-robotics
- Nano Biotechnology and Tissue Engineering
- Process Control in Dynamic Systems, Energy and Biology

Moreover, the department accommodates three national centers of excellence:

- Center of Excellence in Design, Robotics and Automation
Director: Prof. Meghdari,
Tel: (+9821)66165541
- Center of Excellence for Energy Conversion
Director: Prof. M. H. Saidi
Tel: (+9821) 66165526

- Center of excellence in Dynamic and Hydrodynamics of Marine Vehicles
Director: Prof. M. S. Seif
Tel: (+9821)66165699

Career Opportunities

The mechanical engineering program at Sharif University of Technology provides the required education and training for a successful career both in industry and academia. Our alumni are among the most sought after engineers in the job market from all branches of industry including Automotive, Automation and Robotics, Chemical and Petrochemical, etc. Many of our graduates enter high ranking national and international graduate Departments to continue their academic education.





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
<ul style="list-style-type: none">• Math (I), (II)• Physics (I), (II)• Physics lab (I), (II)• Chemistry (I)• Chemistry Lab (I)• Graphics• Statics• Introduction to Materials Science• General Workshop	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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 nano-structure 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.





Department

Email: info@sharif.edu

Website: <http://phys.sharif.edu/>

Address: Department of Physics, Sharif University of Technology, P.O. Box 11156-3516, Tehran, Iran.

Telephone number: +98 21 6616 5301-2

The Department of Physics at Sharif University of Technology was established in 1966. In this department, teaching and research activities are conducted in theoretical, computational and experimental Physics. The department places great emphasis on colloquia and seminars, in which graduate students, faculty members and expert scientists participate. Additionally, the department enjoys national and international collaboration

with various centers, such as the European organization for Nuclear Research in Geneva, Switzerland, the institute for studies in theoretical physics and mathematics, the University of California at Riverside, the Abdus Salaam International Center for Theoretical Physics in Trieste, Italy, and Max Planck Institute for the Physics of Complex Systems, Dresden, Germany.

Undergraduate Course Structure

1st year	2nd year	3rd year	4th year
<ul style="list-style-type: none">• Physics (I), (II)• Physics lab (I), (II)• Math (I), (II)• Physical Education• Diff. Equations	<ul style="list-style-type: none">• Physics (III)• Analytical Mechanics (I), (II)• Electromagnetism (I), (II)• Mathematical Physics (I)• Contemporary Physics• Contemporary Physics Lab• Quantic Mechanics (I)	<ul style="list-style-type: none">• Statistical Thermodynamics (I), (II)• Quantic Mechanics (II)• Lab (IV)• Elective Courses	<ul style="list-style-type: none">• Lab (V)• Quantic (II)• Statistical Thermodynamics (II)• Elective Courses

Graduate Program

In accordance with the requirements of the Graduate School at SUT, Both M.Sc. and Ph.D. degrees in Physics are offered in the following areas:

• Theoretical and Computational Physics

- Astrophysics and Cosmic Ray Physics
- Biophysics
- Complex Systems
- Condensed Matter Physics
- Cosmology and General Relativity
- Foundations of Physics
- Mathematical Physics

- Particle Physics and Field Theory
- Quantum Information
- String Theory
- Experimental Physics
- Chemical Physics
- Cosmic and Gamma Ray Detection
- High Superconductivity

- Low Temperature Physics
- Magnetism
- Laser Medical Physics
- Nanotechnology
- Nonlinear Optics
- Plasma
- Semiconductor Physics
- Surface and Interfaces
- Thin Films

Graduate Research Fields and Facilities

- Astrophysics
- Atomic and Laser Physics
- Complex Systems
- Condensed-Matter Physics
- High-Energy Physics

Affiliated research centers

- Center of Excellence in Complex Systems and Condensed Matter
- Center of Excellence in Nanostructures



Philosophy of Science

Center

Email: info@sharif.edu

Website: <http://philsci.sharif.ir/>

Address: Philosophy of Science Center, Sharif University of Technology, P.O. Box: 11365-11155, Tehran, Iran

Telephone number: +98 21 66164176

Philosophy of Science Center has been established in Sharif University of Technology in 1995 as the first academic institution in this field of study in Iran. The study of philosophical issues arising from scientific theories, methodology of scientific inquiries, the relation and perhaps cooperation between science and religion, and the moral concerns regarding the development of science and

technology form the main focus of education and research conducted at this Center. In addition to that, our students who are mainly graduated from engineering and science departments are free to pursue their own philosophical concerns during their stay in the Center.

Graduate Programs

The Philosophy of Science Center offers the following programs:

1. MA Program in Philosophy of Science

Program Structure

1st year	2nd year	3rd year
1st semester <ul style="list-style-type: none">• Philosophy of Science 1• Moral Philosophy• Metaphysics• Logic	3rd semester <ul style="list-style-type: none">• Philosophy of Technology• Meta-ethics• Ethics of Science• Science and Religion	5th semester <ul style="list-style-type: none">• MA thesis research
2nd semester <ul style="list-style-type: none">• Philosophy of Science 2• Epistemology• Philosophy of Mind• History of Science 1	4th semester <ul style="list-style-type: none">• Seminar on Kantian Ethics• MA thesis research	



2. PhD Program in Philosophy of Science and Technology

The PhD program at SUT's Philosophy of Science Center places major emphasis on independent inquiry. Some of our recent and current PhD research projects are "Metaphysical Consequences of Methodological Naturalism", "Inquiry about the Truth Conducivity of Inference to the Best Explanation", "Normativity of Intentional Content and Its Implications for Cognitive Sciences", and "Divine Action and Human Consciousness".





Languages and Linguistics

Center

Email: info@sharif.edu

Website: <http://language.sharif.ir/>

Address: Languages and Linguistics Center, Sharif University of Technology, P.O. Box 11156-3516, Tehran, Iran.

Telephone number: +98-21-66164810

Languages and Linguistics Center (LLC) is a vibrant center of research and teaching in the fields of TEFL/TESOL and Computational Linguistics. In addition to its MA graduate program, it strives to offer rigorous and high quality language-related courses to undergraduate science and engineering students. To fulfill this mission, LLC offers several language courses including Persian Language and Literature, Modern Persian Literature, Academic Writing (Persian), General English, Technical English (aka English for Specific Purposes), French, German, and Spanish. LLC also offers minor programs in English Language, Computational Linguistics, and Persian Language and Literature. As part of its extracurricular program, LLC also offers courses in Paper Writing (English), TOEFL, IELTS, and GRE.

The LLC currently has 8 core faculty members with some other adjuncts. The LLC main mission is to offer courses to undergraduate students but it also has some graduate students in the fields of TEFL/TESOL and Computational Linguistics. Two laboratories are housed in LLC: Computational Linguistics Laboratory and the General English Laboratory. The LLC faculties are engaged in a myriad of research and teaching activities in the fields of Second Language Acquisition, Language Testing, Discourse Analysis, Sociolinguistics, Psycholinguistics, Machine Learning, Computational Linguistics, Experimental Phonetics, Natural Language Processing (NLP),

Natural Language Understanding & Generation (NLU & NLG), and Speech Processing.

Careers in TEFL/TESOL and Computational Linguistics

An MA graduate in the fields of TEFL/TESOL or Computational Linguistics can find the necessary skills to find job opportunities in the following careers:

- Foreign language teaching (e.g. English)
- Bilingual education
- Translating and interpreting
- Writing and editing
- Language institute management
- Language and speech processing companies

- IT related and AI careers
- Data mining
- Natural Language Processing
- Machine learning



MA Course Schedule in TEFL/TESOL

1st year

- Advanced Writing
- Issues in Linguistics
- Principles and Methods of Language Teaching
- Research Methods
- 5. SPSS and Statistics
- Language Testing
- Seminar
- Discourse Analysis
- Applied Linguistics
- 5. Teaching Language Skills

2nd year

- Contrastive Analysis
- Sociolinguistics
- Materials Development
- Practicum
- 5. Second Language Acquisition
- Thesis

MA Course Schedule in Computational Linguistics

1st year

- Computer Programming
- Introduction to Linguistics
- Formal Syntax
- General Math & Statistics
- 5. Phonetics & Phonology
- Introduction to Computational Linguistics
- Semantics & Pragmatics
- Empirical Methods in NLP
- Morphology
- 5. Seminar

2nd year

- Experimental Phonetics
- Advanced Syntax
- NLP
- Psycholinguistics
- Advanced Math & Statistics in CL
- Artificial Intelligence
- Computer Speech Processing
- Thesis





Advanced Communications Research Institute (ACRI)

 Tel: +98 21 6616 5910
 Fax: +98 21 6603 6002
 E-mail: acri@sharif.edu
 <http://www.acri.sharif.edu>

ACRI was founded in 2004 and was officially registered as a research institute in Oct 2004. Initially three groups were approved, including:

- 1- Optical Access
- 2- Mobile Communications
- 3- Multimedia & Signal Processing

However, there are currently eight groups that are active within ACRI:

- 1- Mobile Communications
- 2- Information Theory and Channel Coding
- 3- Optical Multi-Access Systems
- 4- Signal Processing and Multimedia
- 5- Communication Systems
- 6- Microwaves, Antennas & Propagation Group
- 7- Traffic Modeling and communication Networks
- 8- Game Theory

The main characteristics of ACRI, which make it rather unique in its own kind, include:

- 1- Being the only center of excellence in the nation in Com-



munication Systems with 19 members of academic staff.

2- The quality of undergraduate staff who are among the top 100 students in the national entrance exam (among which the top 30 students come into the communications program).

3- Existence of eight Research Labs within the department.

4- Capability of attracting best researchers from outside and inside Iran in the Institute.

VISION

Fundamental Research in the Area of Telecommunications as an International Center of Excellence

MISSION

1- High Quality Research and Publication in Reputable International Journals

2- World Class Development of Intellectual Property

3- Collaboration with Multinational Telecommunication Institute

4- Creation of an Appropriate Environment for R&D

5- Research Collaboration with Well-Known International Research and Education Center

International Patents

Dr. J. A. Salehi: 14 international patents.

Dr. M. R. Pakravan: 4 international patents.

Dr. B. H. Khalaj: 2 international patents.

Dr. F. Marvasti: 3 international patents.

Funded Projects

- Convergence of Broadband Wired and Wireless
- Access in Next Generation Networks
- Network Information Theory
- Ultra Wideband Communication Systems
- A Preliminary Prototype of a Spread Time Transmitters & Receiver Module
- Novel Cryptographic Transforms for Real 1-D and 2-D Signals.
- Recovery of Signals from Non-Uniformly Spaced Samples Using Fast Iterative Adaptive Schemes
- Design of a Novel Watermarking System for Image and Video Signals
- Design and Implementation of a Wireless Optical CDMA LAN
- Design and Implementation of a Fiber-To-The Home (FTTH) Network using Optical CDMA Technique
- Improvement of A/D Converters Using Iterative Methods
- Design and Implementation of a Free Space Optical CDMA Link
- MIMO – OFDM Simulation & Feasibility Study for designing such a System
- New Transform Techniques: SDFT and its Applications
- Research and Investigation on Prototype Design & Implementation of Short Range Wireless Tactical Systems and Repeaters
- Design and Knowledge transfer of Wireless Tactical DS/SS Link System
- Pilot Scheme Implementation for General Trunk Networks



Advanced Information & Communications Technology Center (AICT)



Tel: +98 21 6616 5169



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E-mail: rabiee@sharif.edu



<http://www.aictc.ir/>

Advanced information and Communications Technology Center (AICT) of Sharif University is a leading research and development ICT center in the Islamic Republic of Iran. AICT has three major research groups, namely “Software Engineering”, “Information Technology”, and “Hardware and Network”. At AICT, our world class experts and faculty members with extensive experience in North American and European corporations (e.g. Intel, AT&T Bell labs, EMC2, AMD, and Fraunhofer IGD) are committed to performing state-of-the-art research, and to develop and leverage cutting-edge technologies. Currently, more than 15 faculty members and eight research labs are closely collaborating with this research center in the field of multimedia systems, social and complex networks, machine learning, data storage systems, mobile value added services, solid-state drives, reconfigurable and dependable computing, hardware security, and ambient intelligence. AICT has also more than 150 technical staff and 12 private sec-

tor corporate partners in industrial projects. Over the last decade, AICT has been a well-known consultant to major government agencies, the Iranian parliament, and major private sector companies. AICT has also initiated, cooperated, and managed a number of national projects including Iran Free/Open Source Software (FOSS) project (The localized OS project based on GNU/Linux customization), National Fuel Smart Card Project (the nation’s largest ICT project), The Design of Tehran Scientific Network and Iran National Intranet Network, Disaster Management Portal, Enterprise Portal and Pre/Post Paid online E-Commerce system and VAS platform for MCI (the largest mobile phone network operator in the Middle East), E-banking, M-Banking (OTA/STK and USSD), Security solutions, EMV POS, ATM and Card Issuance & VSDC Personalization for major Banks, National E-Learning Project, conceptual design of G-Cloud, and design of major data centers in Iran. Our selected products which are based on Open Source software and commercially-off-the-shelf hardware products include Multilingual Enterprise Portal, E-Learning Portal, E-Commerce Portals, Multilingual Search Engines, Multimedia Set-Top-Box, Telematics System, Thin Clients and Embedded Multimedia Information Kiosk, Multilingual Mobile Content & Catalog Generator, M-Payment Systems. AICT also offers advanced ICT Training courses for both individuals and organization staff.

Research Areas

- Software
- Information Technology
- Hardware and Network

Bio Engineering and Health Systems Research Center (BEHSRC)



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<http://www.biomed.sharif.ir/>

The BEHSR was established for the integration of the university's activities in bio-engineering and health science. This is an interdisciplinary center for which all the university divisions can actively participate and collaborate in the areas associated with health and medical devices. There are five distinct active groups in BEHSRC:

1. Systems and procedures of health treatment
2. Systems and procedures of diagnosis
3. Systems and procedures of drug delivery
4. Systems and procedures of rehabilitations
5. Bio materials

Goals

1. Developments in bioengineering basics research and bio instrumentation as well as new techniques in drug delivery and health systems
2. Establishment of bio engineering LABs providing services for researchers
3. Development and advancement of researches associated with public health

SHARIF

Center for Technology Studies (CTS)



Tel: +98 21 6616 5843



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<http://www.techstudies.sharif.ir/>

The Center for Technology Studies is one of the largest research centers at SUT, carrying out studies related to policy-making, technology management, and capability development. CTS was established in 1998 and was recognized as the first “Think Tank” in Ministry of Science, Research and Technology Ministry in 2006. It is supervised by the president of SUT and consists of four groups and three offices.

Groups

- Management & Economics Group:
Rapid economic growth and development may only be achieved through the promotion of innovation capacity and the development of new technologies. Thus, since its establishment in 2001, this group has placed a high priority on policy research, cultural promotion and formulation and implementation of modern technology policy and management approaches. After a long period of activity and involvement in a broad range of projects, the group has focused its efforts in the following areas:

- Industrial Systems & Clusters
- Policy Systems
- Technology Transfer
- Growth Management
- Industrial Capability Development studies Group Pivotal Activities
- Industrial technology policymaking

- Providing consultancy services to companies and organizations in order to improve their processes of decision making
- Holding seminars, conferences, meetings, and panel discussions
- Establishing relations with mass media and the press
- Publishing books and professional bulletins
- Energy and Oil Group Research programs, professional training and consultancy

Fields of Activities

- Different management and economics fields in Energy and Oil industry
- Training programs such as workshops, seminars and conferences in Oil and Energy
- Financial and Investment Management Office (FIMO) aiming to enhance the communication and interaction between Technology and Economics. The Financial and Investment Management Office of CTS was established by a group of our graduates.
- International and domestic financing
- Financial markets (money and insurance)
- Foreign investment
- Export development

Offices

- Urban Planning and Management Office
- Healthcare management



Electronics Research Institute (ERI)



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<http://www.eri.sharif.edu/>

The Electronics Research Institute at Sharif University of Technology (SUT), founded in 1972, was the first research institute in the university in the field of electrical engineering. It is involved in basic and applied research, and, graduate education in the areas of communications, signal processing, cryptology, network security, electronics, and electronic instrumentation. The institute aims at developing new theories, techniques, and solutions in specified areas, including theoretical analysis, feasibility studies, high-tech systems design, technological problem solving, and teaching specialized courses in the nominated areas.

The principal mission of the institute is to offer excellence in both research and education. In research, the institute is committed to collaborations with research and industrial sponsoring organizations, interactions with industrial partners, involving the SUT faculty and graduate students in large research projects, and conducting international collaborative research with other universities and research institutions.

Teaching

The institute is the originator and organizer of the Master's of Secure Communications in the Electrical Engineering Department, where faculty members at the institute are involved in teaching in the same and other relevant departments at the university. So far, the institute has been

offering several postgraduate and undergraduate courses in those departments. The faculty members at the institute have also conducted and supervised a large number of Master's and Doctoral theses in electrical engineering, computer engineering, and mathematical sciences.

Facilities

The institute accommodates a number of modern core laboratories dedicated to:

- Speech and Audio Processing
- Digital Signal Processing
- Image Acquisition and Processing
- Encryption/Secure Systems Design/Evaluation
- Electronic Subsystems
- VLSI Circuits Test/Design
- Radar Signal Processing
- Electronic Instrumentation Systems
- Electronic Portable Data Acquisition (Harsh Environments)

Research Groups

1. Communications and Signal Processing Research Group

- a. Communications and Networking
- b. Image and Video Technology
- c. Audio, Voice, and Speech Processing
- d. DSP and Signal Processing
- e. Information Hiding

2. Cryptology and Network Security Group

- a. Cryptology
- b. Network Security
- c. Security Policy

3. Electronics and Instrumentations Group

- a. Electronic Instrumentations
- b. Test and Analysis of Industrial and Medical Systems
- c. Nondestructive Testing of Materials
- d. Design and Implementation of Industrial Integrated Circuits

Institute for Nanoscience and Nanotechnology (INST)



Tel: +98 21 6616 4123



Fax: +98 21 6616 4119



Email: INST@sharif.edu



Website: <http://nano.sharif.edu/>

Head: Prof. Azam Irajizad | Email (irajizad@sharif.edu)

Address: Institute for Nanoscience and Nanotechnology
Sharif University of Technology, Azadi Ave
Tehran, 14588-89694, Iran.

INST was established in 2005 as an independent center in the university following a two year study of its mission and organization. It includes faculty members from various the departments of Physics, Chemistry, Materials Science, Chemical Engineering, Electrical Engineering, Civil Engineering and Mechanical Engineering. The institute started its PhD program soon after its conception in October 2005 and is currently home to 52 doctoral students. An additional 36 graduates have completed their PhDs in the institute. INST is a rapidly growing institute whose rise of importance has resulted in being designated the «Center of Excellence» (CoE) in the field of nanostructures. Over 600 publications have been published in reputable international journals over the past ten years. The bi-annual international conferences on nanostructures organized by the institute draw participants and contributors from all corners of the globe. Additionally, the institute organizes general and specialized courses and seminars in various fields of nanoscience and nanotechnology, including nanoparticles, nano-powders, coatings, nano-devices, nano-computation, modeling, and nano-biotechnology.

The main goals of the institute are: Fundamental and applied research in nanoscience and nanotechnology, Multi-

disciplinary projects and activities, Serving as a hub for nanotechnology research activities and strategy planning in the country, and Collaborating with international institutes for the advancement of applied nanoscience

PhD Program

The institute's PhD program is one of its main activities. The taught courses in this program are outlined below.

Compulsory Courses

- Nanotechnology 1 and 2
- Characterization Methods of Nanomaterials 1 and 2
- Basic Methods of Nano computation
- General Seminar
- Professional seminar
- PhD Thesis

Elective Courses

- Advanced Topics in Nano electronics
- Advanced Topics in Nanophysics
- Colloidal Nanoparticles
- Advanced Topics in Nanomaterials
- Advanced Topics in Computational Nanoscience
- Mechanical Properties Nanomaterials
- Nano thermodynamics, Electronic and Transport
- Methods of Nanomaterial Synthesis
- Advanced Thin Films, Nano chemistry
- Nanomaterials Chemistry
- Nano Drug Delivery
- Nano-electronics
- Nanophotonic
- New Devices of photonic and Electronic
- Nanofabrication

- Nano Electromechanical Systems
- Surface Science and Technology
- Advanced surface processes
- Chemical Mechanisms of Nanostructures Covering
- Nano ceramic
- Nano composites
- Multiscale Modeling
- Crystallography and Structural Analysis of Nanomaterials
- Nano solar cell
- Multi Scale Modeling
- Applied Mathematics
- Introduction to Thermodynamic and Kinetic
- Special Topics on Nanoscience

Research in INST

Selected Research Fields:

- Synthesis of nanostructured materials by novel methods
- Biomedical applications of iron oxide nanoparticles for targeted drug delivery
- Nanomaterials in photo-thermal and hyperthermia for cancer therapy
- Synthesis and study of polymer based Nano composites as smart materials
- Continuum models for computational Nano mechanics
- Simulations of macromolecules and proteins in Nano-scales
- Modeling of light interaction (linear and nonlinear) with nanostructured systems
- Gas sensors based on nanostructured metal oxides, fibers, carbon nanotubes graphene and new 2D Materials
- Designing and fabrication of microfluidic bio-sensor
- Fabrication of graphene-like electrodes for electrochemical bio sensing
- Synthesis and study of photo-catalytic materials for air and waste water treatment

- Electrochemical investigation of super capacitors
- Liquid and solid state nanostructured solar cells based on Dye, thin films, perovskite material and QDs
- Hybrid LED using Luminescent nanocrystals
- Nanostructured thin films for anticorrosion applications and memristor
- Preparation of Nanostructures for Enhanced Oil Recovery
- Oxygen impermeability in active/passive Nano composite polyethylene films

INST Laboratories:

Research in INST is conducted in the following facilities: Chemical and Physical synthesis of nanostructures Lab, Analysis and Spectroscopy Lab, Nano-biotechnology Lab, and Nano computation Lab.



Center of Excellence in Nanostructures (CEN)

Institute for Nanoscience and Nanotechnology (INST) is honored of being selected as the «Center of Excellence in Nanostructures» in 2005 by Iranian Ministry of Science, Research and Technology. The main goals of the CoE are:

- Establishment of scientific interdisciplinary research environments to help scientists follow international technological and industrial developments
- Educating students in the field of Nanoscience and Nanotechnology
- Cooperation with Institute for Nanoscience and Nanotechnology for training post-graduate researchers
- Collaboration with national and international centers on issues related to the CoE activities
- Exchange of researchers with different international research centers

Institute's Council

- ◆ Azam Irajizad, (Director) Prof. of Physics Dept.
- ◆ Mohamad Mahdi Ahadian, (Assistant director) Assistant prof. of INST
- ◆ Mohammad Ghorbani, Prof. of Materials Science and Engineering Dept.
- ◆ Raheleh Mohammadpour, Assistant Prof. of INST
- ◆ Reza Naghdabadi, Prof. of Mechanical Engineering Dept.
- ◆ Bizhan Rashidian, Prof. of Electrical Engineering Dept.
- ◆ Saeed Shahrokhian, Prof. of Chemistry Dept.
- ◆ Abdolreza Simchi, Prof. of Materials Science and Engineering
- ◆ Nima Taghavinia, Prof. of Physics Dept.
- ◆ Manuchehr Vossoughi, Prof. of Chemical Engineering Dept.

Institute of Transportation Studies & Research (ITSR)



Tel: +98 21 6601 9208



Fax: +98 21 6602 2716



E-mail: itsr@sharif.edu



Website: <http://itsr.sharif.ir/>

The Institute for Transportation Studies and Research was founded in 1994 within the Department of Civil Engineering, under the name of the Center of Transportation Studies and Research, to conduct fundamental and applied research in transportation engineering and planning. In 1999, the growth of research activities at the center led to the creation of the Institute for Transportation Studies and Research under the auspices of the Office of the Vice-President of Research. The Institute has eight faculty members with joint appointments in the Department of Civil Engineering. The Institute is comprised of three divisions:

- Transportation Planning
- Traffic Engineering
- Road and Highway Engineering

Major Research Projects

Important planning projects undertaken by the institute

have included the following research schemes:

- 2013, Improving performance of Tehran travel demand models for year 1410
- 2009-2011, Revision and updating comprehensive transportation planning for the city of Tehran, TCTTS
- 2010, Refinement of the QC protocol for production of performance graded binders in Tehran bitumen production plant, conducted for Pasargad Oil Company
- 2009-2010, Evaluation and improvement of asphalt mixes in city of Ahwaz, conducted for the municipality of Ahwaz
- 2008-2009, A feasible plan for long term pavement performance monitoring program for Iran's roadways (I-LTPP), conducted for ministry of road and transportation
- 2007-2008, Modification of bitumen with crumb rubber and its effect on performance grade and properties of binder conducted for Pasargad Oil Company
- 2007-2009, Design of bus rapid transit (BRT) network for the city of Mashhad
- 2007-2009, Comprehensive transportation studies of Iran (CTSI), higher advisory committee to METRA
- 2007-2008, Feasibility study on bitumen substitute in road industry, conducted for Pasargad Oil Company, Iran
- 2006, Determination of performance grade (PG) of bitumen produced in Pasargad bitumen plants, conducted for Pasargad Oil Company
- 2003-2006, Comprehensive transportation planning for the city of Qom
- 2003-2006, Traffic interchange planning for the city of Shiraz
- 2003-2006, Traffic interchange planning for the city of Mashhad



Marine Engineering Research Center (MERC)



Tel: +98 21 6616 5563



Fax: +98 21 6616 5563



E-mail: info@merc.sharif.ir



Website: <http://merc.sharif.ir>

Marine Engineering Research Center (MERC) of Sharif University of Technology was founded as the Marine Engineering Laboratory around 15 years ago to focus on basic research in hydrodynamics, marine structures and operation as well as the synergy among them. The center has been gradually equipped with advanced marine test facilities and thanks to its body of researchers has become an active national research center. The center currently aims at developing new theories, techniques and solutions in specific areas, including theoretical analysis, feasibility studies, high-tech systems design, technological problem solving, and, in teaching specialized courses in nominated fields. The center has close cooperation

with the relevant departments of science and Engineering at SUT. The center has been selected as “Center of Excellence in Dynamics and Hydrodynamics of Marine Vehicles” in Iran. In addition, this center has international activities and is a member of International Towing Tank Conference (ITTC).

Main Research Area:

- Ocean Engineering
- Offshore Engineering
- Marine Hydrodynamics
- Numerical Fluid Dynamics
- Drag Reduction
- Vibration Analysis
- Condition Monitoring and Fault Diagnosis
- Dynamics Modeling and
- System Identification
- Robotic System
- Underwater Technology
- ROV and AUV System

Design:

- Modern Boat and Ships
- ROV and AUV
- Offshore Structures
- Marine Propellers

Research Group:

There are five main research groups at this center. The overall mission of these groups is to undertake state-of-art research in specific areas of interest and to develop fundamental knowledge about marine vehicles (structures) and ocean environment using analytical, numerical and experimental studies. These groups are as follows:

- Marine Hydrodynamics
- Propulsion Systems (Propellers)
- Autonomous and Remotely Operated Marine Vehicles
- Offshore Structures
- Numerical Simulations

Center Facilities:

According to its fields of research, the center has well-equipped laboratories for experimental tests and has

- 1- Cavitation Tunnel
- 2- Towing Tank
- 3- Wave Maker
- 4- Computational Code

A CFD code has been developed in this center for ship hydrodynamic analysis since 2005.

Power Grid Management and Control Research Center (PGMCRC)



Tel: +98 21 6616 5941

Fax: +98 21 6602 3261

E-mail: vakilian@sharif.ir

PGMCRC was established in 2005 at SUT, through initiation of a mutual cooperation of Electrical Engineering Department with the Iran Grid Management Company (IGMC). It contributes to the development, foundation and application of research into technical, economical, and managerial needs of power grids. Moreover, short educational courses are offered in different aspects of grid management and control.

Main Research Areas

- Control and guidance of power networks in a competent electricity market environment
- Establishment of required mechanism for development and adjustment of competent electricity market
- Planning of restructured regional electricity companies and privatization of electricity distribution services
- Management, control and Pricing of ancillary services in power network
- Improvement of design and operation methods applied to networks security and continuity
- Electricity energy management systems through application of innovative hardware and Software for network control and supervision
- Coordination of electricity market operation through network management and control systems
- Fundamental studies on International network interconnection, power loss reduction and load management
- Optimal power sharing in micro-grids consisting of conventional and converter-based DGs
- Power quality analysis, estimation, and improvement in dc, ac

and hybrid micro-grids

- Modeling and control of high-power converters employed in micro-grids
- Determination of network reliability and security
- Modeling, simulation, design and development of compensators and controllers for improving system controllability and resolving the problems of steady state and transient operation of power system
- Online network analysis and control algorithms.
- Application of FATCS for the improvement of transmission line capacity and power system operation characteristics
- Application of preventive control and protection strategies to preserve the continuity of service
- Restoration of power system after service outages
- Power system fast transient analysis and insulation coordination
- Relay coordination studies
- Power system transient stability and dynamic studies
- Methods for reactive power and ancillary services study and strategies for investment and cooperation in related market
- Other aspects related to electricity market and network management
- Application of different aspects of merging smart grids into distribution systems Research Laboratories
- Control of power systems
- Power system reliability and distributed generation studies
- Power quality and energy optimization
- Dielectric and electrical insulation design and related studies

Research Institute of Science, Technology & Industry Policy (RISTIP)



Tel: +98 21 6601 5139



Fax: +98 21 6601 5140



Email: info@ristip.com



Website: <http://ristip.sharif.ir/>

The research institute for science, technology and industry policy (RISTIP) was founded in mid-2008 through a joint collaboration between Sharif University of Technology and the Expediency Council to conduct interdisciplinary and problem oriented research to help to improve the process of policy making in the country. Its vision was to become a national reference point in five years and a regional intellectual reference in 10 years. The growth of its activities and the scope of its research areas along with its qualified researchers has turned it to a well-known center in the country. RISTIP is now working with almost all high level institutes involved in policy making in areas of science, technology and industry and has developed its original intellectual path.

It is now working with three research groups as introduced below:

Research Group on Science and Technology Policy

Some major projects:

- Monitoring science and technology indicators
- Analyzing the performance of country in high-tech exports

Research Group on Industry Policy

Some major projects:

- Evaluating the performance of government in fourth na-

tional plan in the section of industry

- Analyzing the statistics systems in target countries and suggesting an appropriate model

Research Group on Policy Methodology and Theory

Some Major Projects:

- Developing a methodology for public policy making
- A critical analysis of emergence and development on universities in Iran



Sharif Institute of Economic & Industrial Studies (SIEIS)



Tel: +98 21 6616 5861

Fax: +98 21 6616 5862

Website: <http://sieis.sharif.ir>

Address: No.2, Gohar St., Gasemi St., Habibollahi Av., Azadi Av., Tehran, Iran. Postal Code: 1459986111

Mission:

Creating research competencies for developing national projects and offering solutions for current issues in economic, industrial and managerial areas

Departments:

- Economic Studies group
- Industrial Studies group
- Management & Planning Studies group

Projects:

- Analysis of Factors Influencing Medium-Term Performance of the Iranian Economy,
- Developing Theoretical Basis and Benchmarks for Privatization In Power Distribution Sector- of Iran
- The Impacts of Energy Subsidy Reform on Mapna's Business Environment
- Impacts of Energy Subsidy Reform in Iran
- Developing Strategic Master Plan For National Iranian Gas Corporation (NIGC)- Phase 2
- Developing Strategic Master Plan For National Iranian Gas Corporation (NIGC)- Phase 1
- Economic, Financial and Market Analysis of Iran's ICT Sector and Planning Investment in The Sector

- A Logical and Systematic Transformation Plan for Regulation and Development of Financing Housing Market in Iran
- Efficient and effective system for housing subsidies
- Evaluation of land and housing subsidies in Iran
- How to Improve Iran's Manufacturing competitiveness
- Design of the Integrated Development of the industrial zones Based on small Industries plan
- Developing missions and strategies and the organizational structure of the Department of Civil and Environmental Small Industries
- Privatization plan of Mobarakeh Steel Ltd
- Industrial Development and Renovation Organization of Iran Redesigning the Role of the industrial development of the country
- Iran's Industrial Development Strategy- (Complementary Phases)
- Revising and Updating the Book Government and Economic Growth in Iran 2003 Iran's Industrial Development Strategy- Studies and Planning
- National Budget Reform of Iran
- The optimal size of government in Iran



Sharif Advanced Technologies Incubator (SATI)



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Website: <http://sati.sharif.ir/>

Introduction

Sharif Advanced Technologies Incubator (SATI) was established in 2003, aiming to promote advanced technologies and to commercialize science by functioning as a bridge for coupling graduates and scientists with industries and advanced laboratories. The incubator is located on the north side of Sharif University.

Goals

- To Support entrepreneurship and technological innovations
- To contribute to the local economy, based on knowledge and technologies
- To provide a suitable atmosphere for commercialization of research and technological achievements
- Facilitating job opportunities for new graduates and entrepreneurs to develop new technology fields
- To decrease risks for small and medium knowledge-based enterprises which are active in new technology fields, by providing some facilities and workspace to them

Fields of Activity

- ICT
- Robotics and Automation
- Aerospace
- Biotechnology
- Nanotechnology

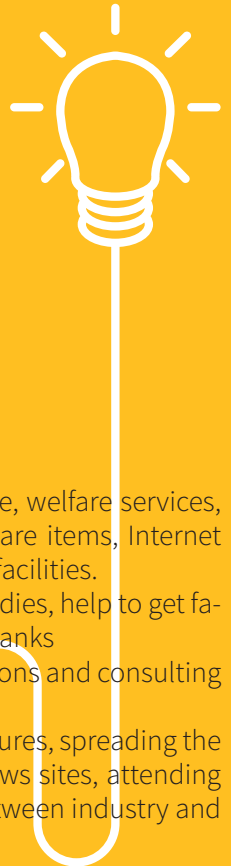
- Optic and Laser Technology
- Electronics and Telecommunication
- Energy Optimization
- Management of Technology
- System Engineering
- New Structures
- Industrial Design
- Materials and Metallurgy
- medical Engineering
- Marine Engineering
- Electronics and Power
- Electronics and Hardware
- Modern Welding Technology
- Mechatronics

Organizational structure

- Admission and Evaluation
- Training and Consulting
- Public Relations
- Administration and Finance
- General Supports

Our Services

- General services: providing workspace, welfare services, computer and its hardware and software items, Internet and network services, maintenance of facilities.
- Financial services: loans, grants, subsidies, help to get facilities from financial institutions and banks
- Training and consulting: training sessions and consulting in the field of business management
- Marketing: Making promotional brochures, spreading the news of success in the media and news sites, attending professional exhibitions, mediating between industry and technical units



Sharif Energy Research Institute (SERI)



Tel: +98 21 6608 5185



Fax: +98 21 6608 5197



E-mail: info@seri.sharif.ir



Website: <http://Seri.Sharif.ir/>

With more than two decades of experience, SERI is a leading research center for energy research in the Islamic Republic of Iran.

Vision: To contribute to the innovative activities related to energy, economic development, social progress and sustainability of environment.

Missions:

1. Training highly qualified experts and researchers
2. Implementing necessary studies and research in energy domain
3. Establishing scientific and technical cooperation with recognized research centers

Partners:

The National Iranian Oil Company (NIOC), Department of Energy Engineering at Sharif University of Technology.

Research Groups:

SERI includes 5 research groups:

1. Energy Modeling and Information System;

2. Energy Management;
3. New Energy Technologies;
4. Energy and Environment;
5. Energy Technology Lab

Main Projects:

1. Comprehensive Plan of Energy Optimization in Oil & Gas Upstream
2. Models of Comprehensive of Energy Plan – Energy Demand & Supply Mode
3. Energy Management in Zarand Coking Plant
4. Setting Energy Standards in Comp. Stations & Natural Gas Network
5. Model of Optimal energy flow in Sabzevar Ferro Chrome Plant
6. Energy System Model of Tehran
7. Assessment of Impact of CO₂ Recovery on Energy System
8. Energy Auditing in Energy Intensive Industries
9. Reallocation of Energy Subsidies
10. Energy Conservation in Social & Economical Sectors
11. Comprehensive Energy Plan

Water & Energy Research Center (WERC)



Tel: +98 21 6616 4131



Tel/Fax: +98 21 6600 5118



E-mail: werc@sharif.ir



Website: <http://sina.sharif.edu/~werc>

The Water and Energy Research Center was founded in 1967 with the aim of accomplishing research in various areas, including energy economy (solar energy in Particular), coordination of research efforts in water and energy and optimization of alternatives related to the technological and socioeconomic needs of the country. Various pilot and full-scale projects were undertaken on the research, design and construction of water desalination pilot plants and solar water heaters. Activities concerning low-cost wastewater treatment systems for private and governmental clients have been initiated at the Center to develop systems capable of producing environmentally acceptable effluent. Providing technical know-how to industries and municipalities regarding the management of air and water quality is another area in which the Center has become active and research has been conducted to gain insight into the current status of urban pollution compared to internationally accepted norms. A special divisions have been recently added to the Center to concentrate on resource recovery tasks and energy storage. The former unit will focus on wastewater reuse, water use efficiency, and best practice management schemes for wastewater sludge followed by entailing waste minimization and energy recovery and through biogas production and utilization. The latter concentrates on energy storage systems such as rechargeable lithium ion batteries and supercapacitors. Regarding to that the center has the expertise for designing and assembling of various configurations of Li Ion batteries such as coin cell and porch cells.



Sharif Technology

Sharif Technology services Complex was established in 2013 to support the formation and growth of professional teams and to increase the quality of these services. It now comprises over 40 units which are active in different specialist fields.

Integrated Technology Services is part of this Complex, which aims to support and facilitate synergic links between different units. The area of the Complex is about 3,000 Square meters, which includes over 40 laboratories, offices and centers. Over 500 students, graduates and researchers are currently employed in the Complex and they play a major role in creating knowledge-based startups at the SUT. The second phase of this complex was inaugurated in the presence of Vice President for Science and Technology in 2015.

In order to promote the culture of creativity, innovation and entrepreneurship, and to support research teams, the following centers have been set up in this Complex:

- Entrepreneurship Center
- Laboratory Service Center
- Technology Transfer Development program
- Commercialization of Student

- technological achievements Program
- SETAK (Development System of Entrepreneurial Ideas)
- Accelerator

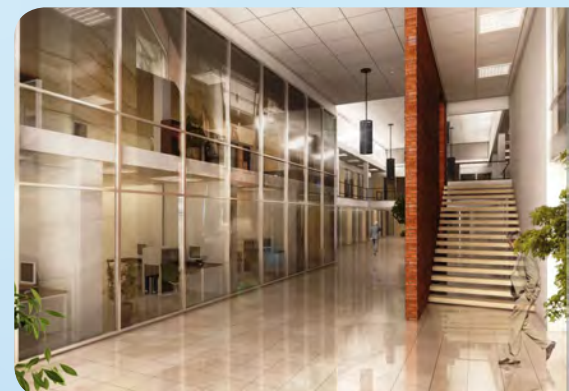
Operational purposes

- Creating employment opportunities and jobs for the university graduates in the technological and development of the knowledge-based activities.
- Formation and development of professional teams and research groups.
- Promotion of the active links with the industry and society.
- Contributing to the development of national knowledge-based economy.
- Operational effectiveness on Industry.
- Increasing social participation and effective engagement at the society level.
- Providing Synergy and sharing of information between the university tech-units.

Activity types of technology services units

- Research services, technology development, consulting and monitoring
- Design services - Engineering and supervision
- Professional Software Development

- Laboratory services and testing standards
- assessment and certification services
- intellectual property rights services
- Special events including conferences, seminars, festivals, and competitions



Services Complex



Welfare

Athletics



Education may kindle the light of knowledge, but sports help to maintain the proper physique. Sports are also an important means of entertainment and a use for energy after long hours of study. Here at Sharif University of Technology we encourage all students to participate in sports during their free time. Relaxed University Competitions are commenced in Football, Futsal, Basketball, Volleyball, Taekwondo, Gymnastics, Swim-

ming, Ping Pong and Chess.

- Over 10 different sports to choose from
- Annual competitions between colleges
- A newly refurbished University sports complex
- Physical activity and great value fitness offers through on the campus or at the sports complex
- Sport facilities including: gyms,

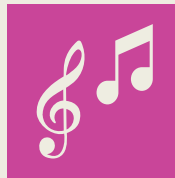
courts (for futsal, basketball, volleyball, badminton etc.), pools and football pitches

- Mostly free of charge or affordable student pricing

Services

Arts & Cultural Activities

Sharif University of Technology has always emphasized the importance of arts and culture in helping students to grow and expand their horizons. That is why there are so many different clubs and associations in Sharif and so there is always an event going on in here. These activities, from music festivals and different plays in the Central Amphitheatre to workshops on how to



create startups, can make the student life very interesting.

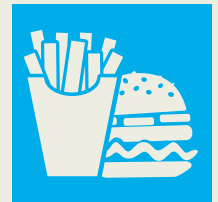
- 28 clubs (such as Music Clubs, Theater Clubs, Mountain Clubs) with near 250 events each year.
- Festivals (Music, Poem, Photography etc.) and voluntary works
- 25 Scientific groups (such as Resana in Electrical Engineering, Kimia in Chemical Engineering) with near 181 events each year.
- 4 Religious Associations with more than 150 events and talks each year
- 55 Journals (Sharif Daily, Sadaf, Farayand Scientific Magazine)

Welfare

Restaurants on Campus

Whether you're looking for a quick bite, a sit-down meal or a nice, hot beverage you'll find a restaurant or cafe to your taste. Everything from pizza and burgers to persian rice and even Kababs are found on campus in Sharif University of Technology.

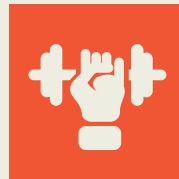
- 9 dinning salons for students, staff and professors
- Serving more than 2000 people at once
- More than 65 foods in 6 categories with beverages and salad



Services

Dormitory

The university offers a variety of living options for students. Our dormitories provide a sense of the distinctive experience you will have studying here. In total, we have 12 dormitories all located near the main Campus. We offer accommodation for married couples as well. Some dormitories are purely for international students, some mix Iranian students with International students. Each dormitory room comes equipped with fresh bedding and linen, a fridge and high speed internet access.



- 12 dormitories on university periphery with more than 3200 capacity
- Laundry services that could include washing, drying and Ironing with affordable student price
- Grocery stores in the buildings or within walking distance
- Satellite sports' court and gyms with fitness exercise equipment

Kish Island

Kish Nonprofit-Nongovernmental Higher Education Institute was established on Kish Island in 1995 with an official permit from the Ministry of Science, Research and Technology; later in 2004 SUT was entrusted with its management. A policy of increasing the number of international programs with the aim to attract international students led to the launch of joint programs with Monash University of Australia as well as Multimedia University (MMU) in Malaysia.



Following the official transfer of Kish University to SUT in 2009, its educational and research activities expanded with the goal of developing higher education in Iran. Since then, more than 2000 students have graduated from SUTIC in a number of engineering and management fields. Admission to the campus can be made either by submitting a direct application or through the nationwide university entrance exam at undergraduate and graduate levels.



Campus

Kish Island

Kish Island, measuring 90 km² in area, is situated 18 km south of Iran's southern coast. Air travel from Kish to Tehran is 1,052 km. A sea voyage from Kish to other destinations in and around the Persian Gulf is 28 km to Hendurabi, 225 km to Qeshm Island, 200 km to Dubai.

The weather is warm and humid on this beautiful island. The average temperature is 27°C and it rarely surpasses a maximum 32°C mark. July and August are the hottest months, and the temperature reaches its lowest in Jan-





uary and February - providing the most favorable climate for residents and visitors. The temperature never falls below 3°C and that can be expected only a few days in winter.

The Persian Gulf is an abundant habitat for numerous marine species. Many of these species have chosen this region in order to escape other hazardous environments. A wide variety of edible and non-edible fish species live in the Persian Gulf waters. Considering the above mentioned facts, this island is an ideal place for marine sports and activities whether it is fishing or water-skiing.

Among all the Iranian islands in the Persian Gulf, Kish is one of the most

significant. No visa is required to travel to this eye-catching Hawaiian and the Mediterranean style resort. Foreign nationals are allowed to stay up to 14 days with no entry visa at the authorized arrival and departure points in Kish Island.

Our programs

B.Sc. Programs

- Aerospace Engineering
- Civil Engineering
- Computer Engineering
- Industrial Engineering
- Material Engineering
- Mechanical Engineering



M.Sc. programs

- Aerospace Eng. (Aerodynamics)
- Aerospace Eng. (Aerospace Structures)
- Aerospace Eng. (Flight Dynamics and Control)
- Aerospace Eng. (Propulsion)

- Biomedical Eng. (Bioelectric)
- Civil Eng. (Earthquake)
- Civil Eng. (Environmental Eng.)
- Civil Eng. (Structural)
- Chemical Eng. (Transport Phenomena & Separation Processes)
- Civil Eng. (Construction Eng. and Management))
- Electrical Eng. (Digital Electronics)
- IT Eng. (Computer Network)
- Industrial Eng. (Engineering Management)
- Mechanical Eng. (Applied Mechanics & Design)
- Mechanical Eng. (Biomechanics)
- Mechanical Eng. (Energy Conversion)

- Mechatronics Engineering
- Nano Technology Eng. (Nano Materials)
- Petroleum Eng. (Drilling Eng.)
- Petroleum Eng. (Reservoir Eng.)
- Master of Business Administration (MBA)

PhD programs

- Aerospace Engineering
- Civil Engineering
- Computer Engineering
- Mechanical Engineering
- Marine Engineering
- Materials Engineering

For further enquiries regarding applications and admission, please contact admissions@kish.sharif.edu

Kish Campus:

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Sharif University of Technology (SUT)
offers one of the most competitive and
rewarding undergraduate and graduate
set of programs in the region, hosting
some of the best minds of Iran. SUT
has welcomed international students
and researchers in the last 20 years
and is eager to continue this tradition
by admitting excellent applicants from
across the world. In fact, we have been
blessed with an ongoing flow of some of
the best international students and have
hosted over 15 different nationalities at
undergraduate and postgraduate levels.



**APPLY
NOW!**

Key Dates

- **Spring Semester** Application Deadline: 1st October
Registration: 1st February
- **Fall Semester** Application Deadline: 1st June
Registrations: 15th September

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