

Mathematical Sciences

Department

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

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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



$$\varphi = \frac{1+\sqrt{5}}{2}$$



$$P_{n+1} - P_n \leq \frac{1}{2^n} \dots \dots \dots \text{i.o.}$$

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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

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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