

# Department of Mathematical Sciences

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## **Introduction**

Mathematics is the study on numbers, spaces, sets and functions with the basic human mental abilities such as classification, calculation, estimation and proof. It is used to abstract and quantify the natural phenomena, and serves as the language of science, essential to understand the law of nature.

As human civilization develops and matures, the role of mathematics continues to increase in its use and importance, not only in the development of the natural science and engineering but also in the study of humanities, social studies, economics and related disciplines. In our current information society advanced mathematics is essential in many areas such as communication, computer science, information security and finance.

The Department of Mathematical Sciences has two objectives, research and education. It does research on algebra, analysis, geometry, probability, statistics, topology, bio-mathematics, computational mathematics, financial mathematics, etc. It also emphasizes contribution to the society by producing leading experts in mathematical sciences. To achieve the goal, the Department maintains the highest level of education and research, expands interdisciplinary studies with science, engineering and business administration, and stimulates interaction with other universities, research institutes and industry to induce synergy effects. To contribute to the development of new technology, the Department encourages students to pursue a minor or double major so that they can be ready for future cooperation with experts from other fields. The Department wishes, by establishing close ties between energetic faculty and creative students, to lead 21st century mathematics of Korea with an effective transfer of mathematical knowledge from faculty to students.

Recently the demand for KAIST graduates majoring mathematical sciences is increasing. Graduates with bachelor's degree find various career paths, those with master's degree go mostly into research institutes or areas related to finance, computer science and information, and those with Ph. D. take positions in universities, research institutes and industry.