

Department of Mathematics

Tel : +82 2 961 0255 Fax : +82 2 961 0644 E-mail : math@khu.ac.kr URL : http://maths.khu.ac.kr/

What is Mathematics?

Mathematics is the study of structures of some important concepts such as numbers and spaces. Based on its strict logics, Mathematics provides us with a basic language for understanding and learning many things in nature and society. By learning lots of important concepts in modern mathematics, students can obtain an adequate basis for further study in either pure or applied mathematics. Nowadays, more and more fields in science and sociology requires mathematically well-disciplined people, so Mathematics provides an invaluable background for many careers.

Mathematics at Kyung Hee

The Department of Mathematics at Kyung Hee University offers the degree of Bachelor of Science through its undergraduate program. There are nine faculty members working in various areas of pure and applied mathematics. The purpose of the undergraduate program is to equip students with a good understanding of modern mathematics. Each program is designed to stimulate students' interest in each subject and to prepare them for later works in pure and applied mathematics. Our department also have graduate programs leading to the Master of Science and Doctor of Philosophy degrees.

Degree Requirements

To receive the Bachelor of Science degree in Mathematics, a student must:

- complete a minimum of 130 credit units
- satisfy the general requirements of the School of Sciences for the bachelor degree
- complete 63 units of major courses including 21 units of required courses for a major in Mathematics
- complete 48 units of major courses including 21 units of required courses for a minor in Mathematics

Courses

Year 1

Calculus 1, Calculus 2, Discrete Mathematics, Physics 1, Physics 2, Chemistry 1, Chemistry 2, Biology 1, Biology 2

Year 2

Introduction to Mathematical Analysis, Introduction to Differential Equations, Sets and Metric Spaces, Introduction to Algebra, Vector Calculus, Introduction to Probability and Statistics, Linear Algebra, Mathematical Analysis, Differential Equations

Year 3

Modern Algebra I, Functions of a Complex Variable I, Topology I, Mathematical Statistics, Modern Algebra II, Functions of a Complex Variable II, Topology II, Modern Geometry, Applied Mathematics, Theory of Probability, Calculus for Several Real Variables

Year 4

Number Theory, Real Analysis, Topics in Topology, Differentiable Manifolds, Topics in Statistics, Numerical Analysis, Topics in Algebra, Topics in Analysis, Differential Geometry

Careers and Graduate Destinations

Academic Jobs

A Ph.D. is generally required for positions in a college or university. A strong commitment to both teaching and research is usually expected. Only students who really love mathematics and who are talented at it should plan on this career direction.

Industry and Government Jobs

There are a number of positions in government and industry for mathematicians with a Ph.D. Also, mathematicians with a B.S. or M.S. degree have a variety of opportunities. Most positions at this level require training in some field of applied mathematics, along with some experience with computers. Here are some examples:

- Statisticians
- Actuaries
- Operations Researchers
- Classical Applied Mathematicians
- Computer Mathematicians

High School Teachers

After the first two semesters, one can apply to the qualifying interview for teachers' license. Otherwise, one can achieve teachers' license by studying in the Graduate School of Education. Teaching mathematics in middle and high schools is very exciting if one is really want to do it.

Mathematics-Related Jobs

Many people trained in mathematics enter professions where their mathematics background proves to be good resources. Examples include computer programmers, computational biologists, accountants, finance theorists and economists.

Faculty

Chang-Hoon Park, Ph.D. Massachusetts Institute of Technology, 1987, Professor, Statistics, cpark@khu.ac.kr

Chan-Yong Hong, Ph.D. University of Texas at Austin, 1989, Professor, Algebra, hcy@khu.ac.kr

Jongmin Han, Ph.D. Seoul National University, 2000, Professor, Analysis, jmhan@khu.ac.kr

Se-Goo Kim, Ph.D. Indiana University at Bloomington, 2001, Associate Professor, Topology, sgkim@khu.ac.kr

Soojoon Lee, Ph.D. Seoul National University, 2002, Associate Professor, Applied Mathematics, level@khu.ac.kr

Kyungwoo Song, Ph.D. Indiana University at Bloomington, 2002, Associate Professor, Analysis, kyusong@khu.ac.kr

Seungil Kim, Ph.D. Texas A&M University, 2009, Assistant Professor, Numerical Analysis, sikim@khu.ac.kr

Jong-Do Park, Ph.D. Seoul National University, 2005, Assistant Professor, Several Complex Variables, mathjdpark@khu.ac.kr

Ho Lee, Ph.D. Seoul National University, 2010, Assistant Professor, Analysis, holec@khu.ac.kr