

SOGANG
NATURAL SCIENCES

Chemistry | Life Science | Mathematics | Physics





Dean's Message

On behalf of our faculty, staff, and students, I welcome you to the School of Natural Sciences. The School of Natural Sciences, composed of four departments, offers bachelor's, master's and Ph.D. degrees in mathematics, physics, chemistry, and life science, respectively. The alumni of the School demonstrate that its graduates are well prepared to assume responsible positions in academy, industry and government not only in Korea but also in foreign countries worldwide. We believe that our firm determination for excellence in science teaching curriculum and research programs should pave the way for the accomplishments of our alumni. Currently, over 100 members of faculty and staff in our school are committed to providing outstanding educational experiences for undergraduate and graduate studies. They also demonstrated their top level research activities nationwide by being awarded national graduate training and/or research projects such as Science Research Center, and National Research Laboratories. We will continue our efforts to create and sustain intellectually challenging and diverse academic environments through excellent teaching, scholarships, and services in our school. We also trying to open for the foreign students to join as undergraduate and graduate school to get excellences in the teaching research program. I encourage you to browse the School of Natural Sciences brochure and website to find out your opportunities at Sogang.

Sincerely,
Dean Prof. Lee, Bum-Hoon

About Sogang

Sogang University was established by the Society of Jesus to provide an education based on Catholic beliefs and inspired by the Jesuit philosophy of education, in conformity with the Korean tradition of education. Sogang University aims the education of the whole person with love and faith, respect the values on the sense of human dignity and encourage to pursuit and seek for learning with the sincere quest for truth. Through this education, educate the talents who will devote their lives to the development of a humanistic culture and community.

About School of Natural Sciences

Since the opening of Sogang University in 1960, the Sogang University School of Natural Sciences has been reorganized into the Department of Natural Sciences, which consists of four departments, including the School of Mathematics, Physics, Chemistry, and Life Sciences (Biology). The Faculty of Natural Sciences has over 100 faculty members, including 60 full-time professors who are among the best in the world, to educate undergraduate students and graduate students, and to fulfill the university's other social responsibilities. In addition, many assistants in the Department of Natural Sciences are making the best efforts to maintain and develop the excellence of education and revitalize research. As a result of these efforts, the Sogang University School of Natural Sciences has always been at the forefront of various evaluations, and has been selected for major educational and R&D projects such as BK21, SRC, and the National Research Laboratory.

Since
1960

100
60

Faculty Members

Full-time Professors

How to apply for graduate programs

<http://gradsch.sogang.ac.kr/>

Application Schedule

	For Spring Semester	For Fall Semester
Admissions guide announcement	October	March
Application	November to December	April to May
Acceptance announcement	January	June

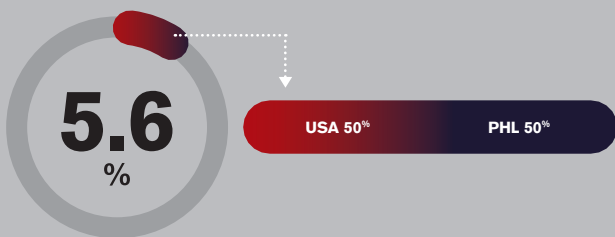
Sogang Global Fellowship

Class	Requirements	Amount	Remarks
Sogang Global Fellowship(A)	S-TOPIK 4th grade or above, TOEFL PBT 550(CBT 210, IBT 80), TEPS 550, IELTS 5.5 or above	80% of tuition	When keeping GPA over 3.5/4.3, scholarship will be awarded maximum during 4 semesters for Master's and Doctoral degree courses, 8 semesters for Integrated Master's and Doctoral degree courses
Sogang Global Fellowship(B)	One who is recommended by the dean of dept. and confirmed by the dean of graduate school.	40% of tuition for 1 year	

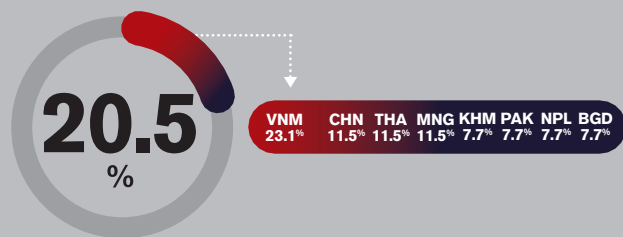
- 1 Students who are from English mother-tongue country will be awarded "Sogang Global Fellowship(A)"
- 2 If GPA goes below 3.5/4.3 during the regular semester, scholarship will not be awarded from the next semester. However, students must take more than 3 credits for every semester except the last semester of regular enrollment.
- 3 If students submit "Language Proficiency Test Score" before the first date of 1st semester, the scholarship will be awarded from the first semester. If they submit "Language Proficiency Test Score" during the semester, the scholarship will be awarded from the next semester.

Status of International Graduate Students

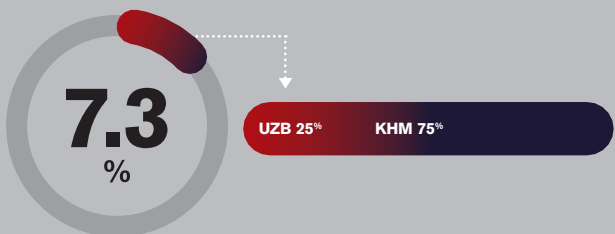
Mathematics



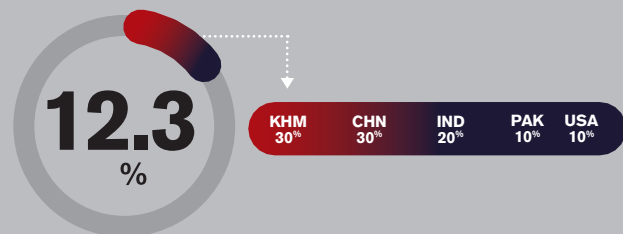
Chemistry



Physics



Life Science



Department of Chemistry

<http://chemistry.sogang.ac.kr>

Sogang University opened in 1960 with the efforts of the Jesuit priests, and the chemistry department was opened in 1964. Sogang University's Chemistry Department was recognized for its efforts by early professors and students, and in March 1973, it was operated as an experimental university. In March 1984, In May 1990, the Organic Reaction Center (Science Foundation), which was the first government-led long-term project to be undertaken in Korea, was hosted (Professor Yoon, Prof. Yoon) and positioned itself as the best chemistry department in Korea. In the meantime, the chemistry professor at Sogang University has been involved in five chemistry professors (Professor Yoon Sung-min, professor of Yonsei University in 1975, professor Baek Woon-ki in 1997, , The Magnetic Resonance Society (2005-2006, Professor Sohn Hyun Soo), and the Science Foundation Basic Research Team (Jin Jong-shik, 2002-2004). Currently, there are 17 professors, 285 undergraduates, 64 master's degree students, and 80 graduate students of Ph.D.

The major subjects of the department of chemistry are physics, organic chemistry, analytical chemistry, inorganic chemistry, and biochemistry. In addition, excellent faculty members in each field are striving to maintain strict and fair academic management as well as lectures and experiments. The curriculum of chemistry is taught through thorough teaching and experimentation by faculty members. Through this, students acquire specialized knowledge and gain a comprehensive knowledge of chemistry by becoming interested in neighboring fields related to chemistry.

Faculty Members

Name	Major Field/ Research Interest	E-mail (@sogang.ac.kr)	Name	Major Field/ Research Interest	E-mail (@sogang.ac.kr)
Chi, Dae Yoon	Organic Chemistry, Medicinal Chemistry, Labeling Chemistry	dychi	Moon, Bongjin	Organic Chemistry, Polymer Chemistry, Organic Materials Chemistry	bjmoon
Hur, Nam Hwi	Inorganic Chemistry, Materials Chemistry	nhhur	Nam, Do-hyun	Organic chemistry, Medicinal Chemistry, Bio-polymers	dhnam
Jo, Kyubong	Biochemistry, Analytical Chemistry, Biophysics	jokyubong	Oh, Han Bin	Physical Chemistry, Mass Spectrometry	hanbinoh
Kang, Young Soo	Physical Chemistry, Nanomaterials and Devices	yskang	Seo, Won Seok	Inorganic Chemistry, Nanochemistry	wsseo
Lee, Duckhwan	Theoretical Chemistry, Science Communication	duckhwan	Shin, Kwanwoo	Surface Chemistry, Polymer and Biological Interfacial Analysis	kwshin
Lee, Duck-Hyung	Organic Chemistry, Medicinal Chemistry, Organic Materials	dhlee	Shin, Woonsup	Electrochemistry, Analytical Chemistry	shinws
Lee, Hyun Soo	Bioorganic & Protein Chemistry, Chemical Biology	hslee76	Sung, Bong June	Physical Chemistry, Computational Chemistry, Theoretical Chemistry, Polymer Chemistry	bsung
Lee, Won Koo	Organic Chemistry	wonkoo	Yoon, Kyung Byung	Inorganic Chemistry	yoonkb

Department of **Life Science**

<http://lifescience.sogang.ac.kr/>

Life Science has been an integral part of Sogang University since its inception in February of 1960. The first Genetics class was offered in April, 1961 and three years later, in March, 1963, the Department of Biology was officially established. In 1993, the Department name was changed to Life Science to embrace the advances of Biology and Life Sciences. We have now grown to 15 current professors with 7 post-doctoral fellows, 80 graduate students (both Master and Ph.D. programs), and 255 undergraduate students (as of 2017). In 2017, we celebrated our Golden Jubilee (the 50th year) of our department with thousands of alumni and students.

Faculty in our department have diverse research interests that can be categorized into three general groups: Microbiology (Virology, Bacteriology, and Protistology), Plant Biology (Molecular and Cellular Biology, and Plant Genetics), and Animal Biology (Immunology, Neurobiology, Developmental biology, Cell Signaling, Cancer, and Stem Cells). A priority within the Department has been to establish strong and collaborative atmospheres which we believe fuel the superior quality of both research and education. From this basis, strong inter-departmental and multi-disciplinary researches and achievements have been additionally followed. Consequently, our students, staff members, faculty members, and alumni have always been extending boundaries of knowledge in basic research, education, health sciences, business, and beyond.

The Department of Life Science at Sogang University is an exciting place to be. We now have over 50 years of experience and believe that our research and education will continue to contribute to society for another century and more.

Faculty Members

Name	Major Field/ Research Interest	E-mail (@sogang.ac.kr)	Name	Major Field/ Research Interest	E-mail (@sogang.ac.kr)
Cha, Hyuk-Jin	Cell Signaling Research	hjcha	Lee, Byeong-ha	Molecular Genetics, Plant Gene Regulation	byeongha
Han, Ching-tack	Cellular Biochemistry	cthan	Lee, Gap Ryol	Molecular Immunology	grlee
Ju, Bong-Gun	Cell Stress Response, Gene Regulation, Cell Differentiation	bgju	Lee, Hosuk Sean	Molecular Neurobiology	hslee
Jung, Kwang-Hwan	Microbiology, Biophysics	kjung	Lee, Jeong K	Biochemistry and Microbiology	jgklee
Kim, Jung-ho	Cancer Biology, Stem Cell Biology, Cancer Stem Cell Biology	jkim	Lee, Jung-Ha	Animal Physiology, Neurobiology, Electrophysiology	jhleem
Kim, Kun-Soo	Microbiology, Host-Microbe Interactions	kskim	Lee, Kyu-Ho	Molecular Microbiology and Biofilm	kyuholee
Kim, Seong-Ryong	Plant Molecular Genetics, Protein Engineering	sungkim	Shin, Hyoung Doo	Human Genetics, Population Genetics	hdshin
Kim, Won-Sun	Developmental Biology	wskim			

Department of **Mathematics**

<http://math.sogang.ac.kr/>

Since the beginning of human history, many subjects of mathematics have occurred due to the necessity of calculation relating to taxation and merchant; number theory; geodesy; astronomy. As the human civilization advances, mathematical areas have been expanded and regarded as the most efficient and general research method in various phenomena and complicated relations in such diverse areas as natural science, engineering, humanities, social science, and so on.

Mathematics department was established in 1960 when Sogang University (it was called Sogang College at that time) was founded; since then, mathematics department, equipped with its prominent faculty, has been passionate in education and research. As we have conducted research supported consistently by various research institutions, Sogang mathematics department now stands in line with the world prestigious universities in terms of its quantitative and qualitative research outcome. Mathematics department has also fostered many prominent human resources and mathematicians.

We study pure mathematics such as geometry, algebra, topology, analysis; and applied mathematics such as engineering calculations, financial mathematics. We also aim at fostering human resources who will lead mathematical science research and industrial development in the near future. The demand of Sogang mathematics graduates is consistently increasing; mathematics graduates are working in many areas related to education, finance, computer, and information, and playing pivotal roles in those areas. Sogang mathematics department would like to welcome everyone who has dream and passion in mathematical science.

Faculty Members

Name	Major Field/ Research Interest	E-mail (@sogang.ac.kr)	Name	Major Field/ Research Interest	E-mail (@sogang.ac.kr)
Cho, Sanghyun	Several Complex Variables, Partial Differential Equations	shcho	Lee, Jaesung	Financial Mathematics	jalee
Chung, Soon-Yeong	Analysis, Partial Differential Equations	sychung	Lee, Jong Bum	Geometric/Algebraic Topology	jlee
Ho, Pak Tung	Differential Geometry, Geometric Analysis, Geometric Flow, Partial Differential Equations	ptho	Lee, Young-Ran	Partial Differential Equations, Mathematical Physics	younglee
Jo, JangHyun	Algebraic Topology, Cohomology of Groups	jhjo	Oh, Young-Tak	Representation Theory and Algebraic Combinatorics	ytoh
Kim, Hyunseok	Partial Differential Equations, Navier-Stokes Equations	kimh	Rim, Kyung Soo	Harmonic Analysis	ksrim
Kim, Jongsu	Differential Geometry (Mathematics)	jskim	Shin, Chang Eon	Signal Processing and Applied Harmonic Analysis	shinc
Kim, Jon-Lark	Coding Theory, Cryptography, Artificial Intelligence	jlkim			

Department of **Physics**

<http://physics.sogang.ac.kr/>

The department of physics of Sogang University was founded in 1960 with the purpose of educating talented students to have a lofty sense of responsibility and highly creative mind. It is one of 6 departments (economy, history, mathematics, English literature, philosophy) which comprised the Sogang University when it was established. As of 2008 the personnel of physics department is composed of 15 professors, 57 graduate students, and 119 undergraduate students.

Pure theoretical physics, condensed matter physics, and opto/bio physics are the specialized research area in the physics department. "Quantum Spacetime Research Center" whose director is Professor Bum-Hoon Lee is the cornerstone of the division of pure theoretical physics. The center is one of "Superior Research Center" which is one of the very prestigious research project supported by the Ministry of Education in Korea.

All of the above research groups are conducting competitive researches on world class scale.

Recently Sogang University initiated a new model of the cooperation between academic research and industry called SIAT (Sogang Institute of Advanced Technology). It is one of innovative programs of Sogang University. A substantial number of physics faculty members majoring in applied physics are participating in this SIAT program.

We will keep on endeavoring on the education and research, and will do our best to educate students who can lead the global age of 21st century. We hope you can obtain useful information from this homepage, and please don't hesitate letting us know the inconveniences and things to be improved found in this homepage.

Faculty Members

Name	Major Field/ Research Interest	E-mail (@sogang.ac.kr)	Name	Major Field/ Research Interest	E-mail (@sogang.ac.kr)
Cheong, Hyeonsik	Condensed Matter Experiment, Semiconductor Physics, Nano Physics	hcheong	Lee, Bum-Hoon	Quantum Field Theory, String Theory	bhl
Cho, Kyu-man	Laser Optics, Precision Optical Sensor, Optoelectronics, Biosensor	kcho	Lee, Hyun Cheol	Condensed Matter Physics, Correlated Systems	hyunlee
Han, Do-suck	Material Physics and Carbon Fiber Composites	dshan	Lee, Kiejin	Microwave Physics	klee
Jang, Joon Ik	Experimental Condensed Matter Physics Semiconductors, Nonlinear Optical Materials	jjcoupling	Park, Jeong-Hyuck	String Theory, Statistical Physics (Emergence)	park
Jung, Myung-Hwa	Physics, Magnetism, Spintronics Topological Materials, Thermoelectrics	mhjung	Park, Young-Jai	Particle Physics, Mathematical Physics	yjpark
Kim, Do-Hyun	Statistical Physics	dohyunkim	Rim, Chaiho	Quantum Field Theory	rimpine
Kim, Doseok	Nonlinear Optics, Condensed Matter Experiment	doseok	Son, Wonmin	Quantum Optics and Quantum Information	sonwm71
Kim, Hyunjung	Synchrotron & XFEL X-Ray Scattering, Condensed Matter Experiment	hkim	Stefano, Scopel	Particle Physics, Cosmology	scopel
Kim, Wontae	Quantum Field Theory and Quantum Gravity	wtkim			



The Remarkable Performances of Sogang Natural Sciences



**SOGANG
UNIVERSITY**

SOGANG UNIVERSITY | School of Natural Sciences

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