



College of Engineering Hanyang University

The Center of Advanced Science and Technology in Korea





Hanyang College of Engineering, the Innovative Brand Power of Hanyang University Leading the Future Convergence Era

Since the founding as the Korea's first private engineering college in 1939, the school has had a profound impact on society to be even referred as the 'engineering military academy'. It is not an exaggeration when I say the history of Hanyang College of Engineering was the backbone of Korea's history in advancement of science and technology as well as industrial technology.

Hanyang's tradition has pursued pragmatic learning since the beginning and the school has produced expert engineers dynamically active in almost every field of the industry with core studies in architecture, construction, environment, transportation, logistics, electronics, communications, computers, machinery, automobile, industrial management, materials, chemicals, etc. This tradition has continued the school's reputation as the key industry-academic university that implements "school-institute-industry" cooperation and connection by organically establishing cooperative system between distinguished researchers inside and outside of the school and by implementing systematic educational programs through establishing field training and technology training, among others, within the College of Engineering's curriculum as mandatory curriculum.

The 21st century is a knowledge and information society that have no borders and where infinite competition and cooperation unfolds. In light of this context, global economy/industry paradigm is recently breaking down the walls in each field and the keyword 'convergence' that can create synergy effect through integration of various fields has emerged as the key topic of the future industry. With Hanyang College of Engineering's proud reputation and brand power as the leader of challenge and innovation, we must meet the demands of the convergence era one step faster. For this purpose, the school has set the educational goal as the cultivation of scientific minds who will lead the development of future growth engine through convergence engineering education, and the school is implementing a challenging educational system called Division of Global Convergence Engineering.

Our school needs to introduce a more systematic educational system besides establishing a school system that caters to the global standard, focused promotion of flagship research areas, etc., while actively utilizing firm infrastructure of Hanyang College of Engineering, which is a valuable asset we already possess. And I will dedicate myself to revitalizing the glory of Hanyang College of Engineering by implementing New Hanyang 2020 vision through the cultivation of practical talents that meet the demands of the convergence era by operating Organic Nano-engineering Department, Energy Engineering Department, Division of Convergence Electronic Engineering, etc.

In order for Korea to continuously develop and stand at the center stage of the world, we desperately need talents equipped with international level of competence. Our school's students, staff, faculty and even alumni will come together with one spirit and give their best efforts and passion to make a firm foundation where the global leaders of tomorrow can stand. The direction we must move to and the role we must take on have already been set for us. We will passionately leap forward toward our new goal of becoming a world-class engineering college by continuing on Hanyang's pragmatic learning, unique tradition and pride that can secure our advantage in the future global competitive technology era. I ask for your support and love.

Dean of Hanyang College of Engineering

HYCE's History



1939



Dong-a Polytechnic Institute was founded by Dr. Lyun-Joon Kim

1941



Renamed as the Dong-a Advanced College of Engineering

1948



Accredited as Hanyang Engineering College and Dr. Lyun-Joon Kim was elected as the first Dean of the College

1953



Graduate School of Engineering established

1959



Hanyang University consisting of 9 engineering departments and 6 ancillary engineering departments was established

- Selection of University for Creative Korea in Metropolitan Area (Division of Computer Science and Engineering, Department of Automotive Engineering, Division of Mechanical Engineering)
- Selection of Leaders in Industry-University Cooperation (LINC)



2014

- Applied Systems Department established
- Prof. Kwan-Soo Lee was appointed as the 17th Dean of HYCE.



2013

Software major in Division of Computer Science and Engineering was newly established.



2012

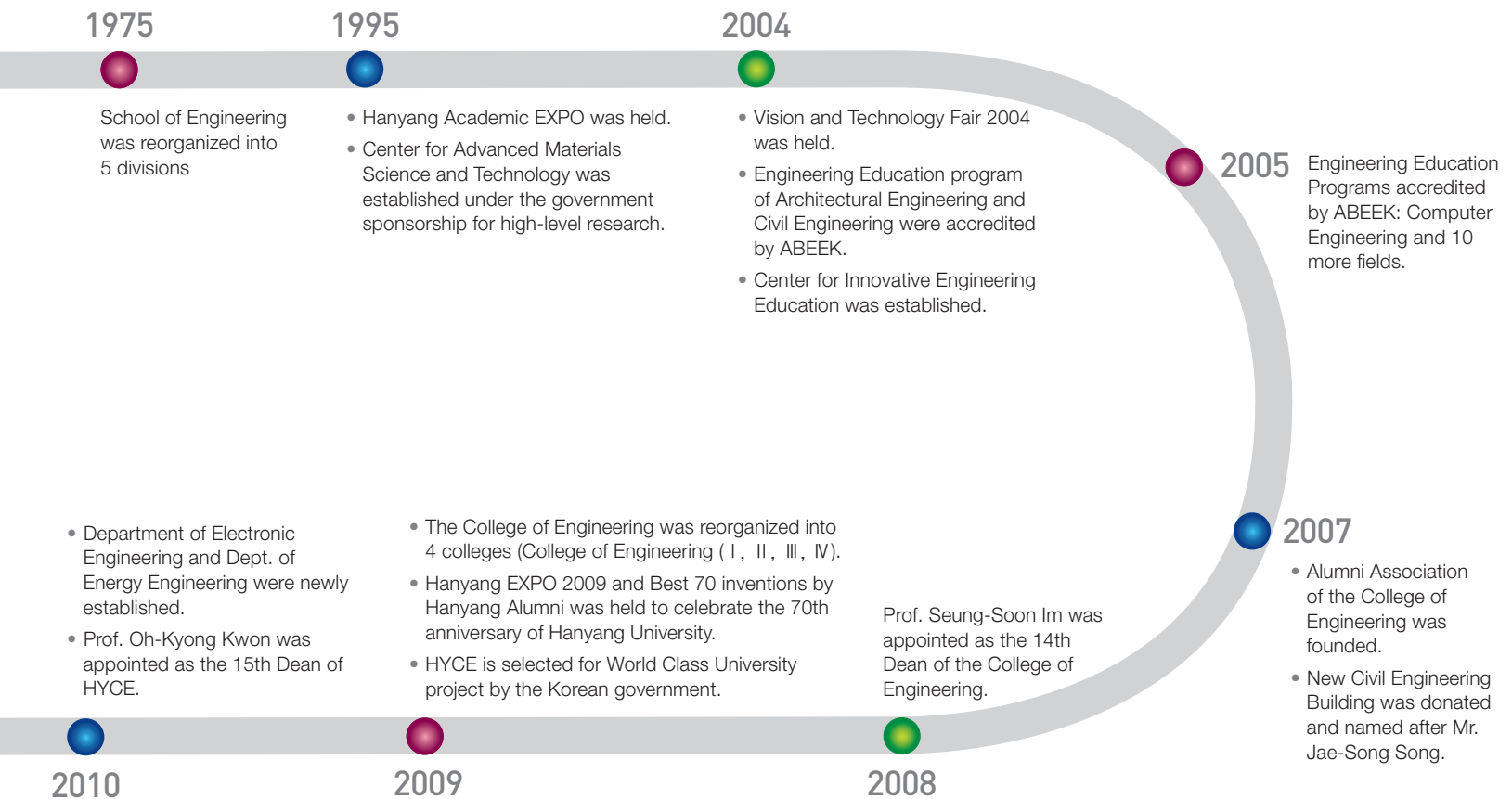
- Department of Organic Nano Engineering and Dept. of Automotive Engineering were newly established.
- Prof. Jae-hoon Choi was appointed as the 16th Dean of HYCE.
- 4 colleges (College of Engineering I, II, III, IV) were integrated into The College of Engineering.



2011

Driving Power which led Development of Korea, History of Hanyang College of Engineering

Hanyang College of Engineering set its sail in 1939 as the first private college of engineering in Korea sowing seeds of dream in Korea which was suffering from Japanese occupation and Korean war. The spirit to save the country with technology by cultivating practical talent to serve for the country and the nation made seeds of hope sprout and the will of challenge which never surrender against any difficulty has built branches of growth. In addition, it is placed at the position of 'The growth engine of Korea' in deed as well as in name blooming beautiful flowers with powerful energy of never ending challenge and growth. The future of Hanyang College of Engineering to bring an abundant harvest shall become another history to open the future of Korea.



HYCE's Founding Spirit and Vision

- Educational Purpose and Objectives
- Mission and Vision
- 6 Strategic Tasks



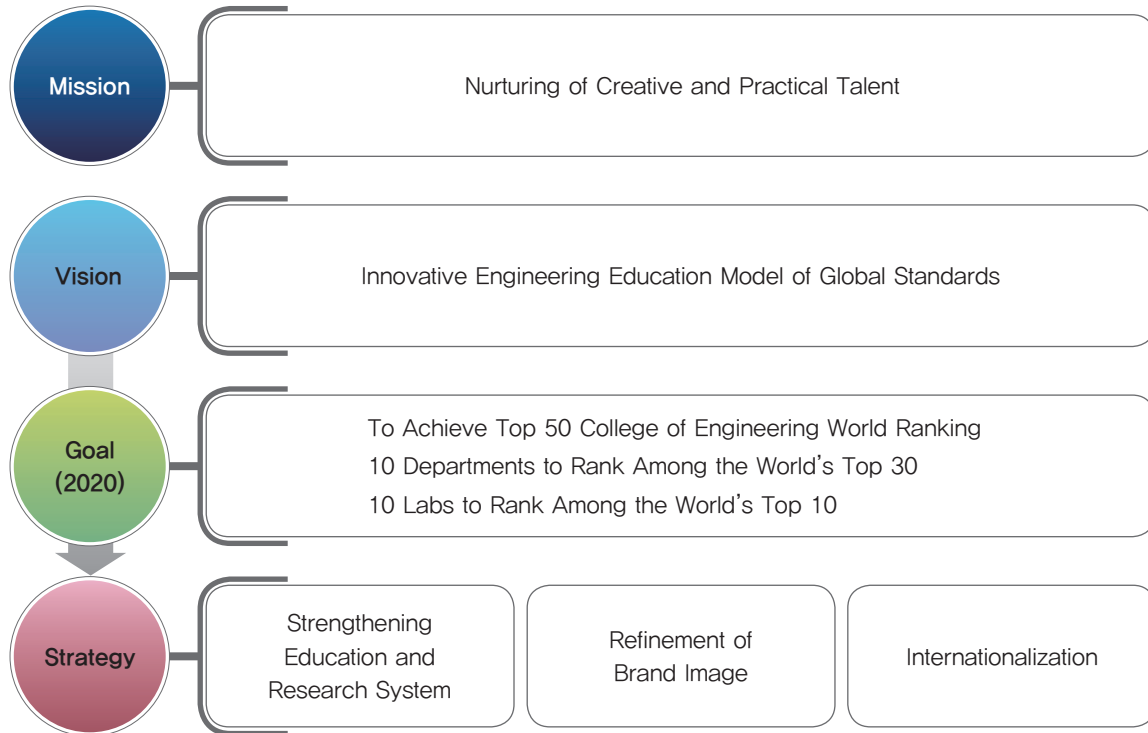
Educational Purpose

Hanyang College of Engineering follows the University's founding philosophy of "Love in Truth and in Deed". By employing cutting-edge technology and promoting professional skill development, the College endeavors to produce experts who can lead highly industrialized, knowledge-and-information-based societies. Thus, the College considers to be essential, the fostering of talent that includes technological know-how as well as cultural and philanthropic sensibilities.

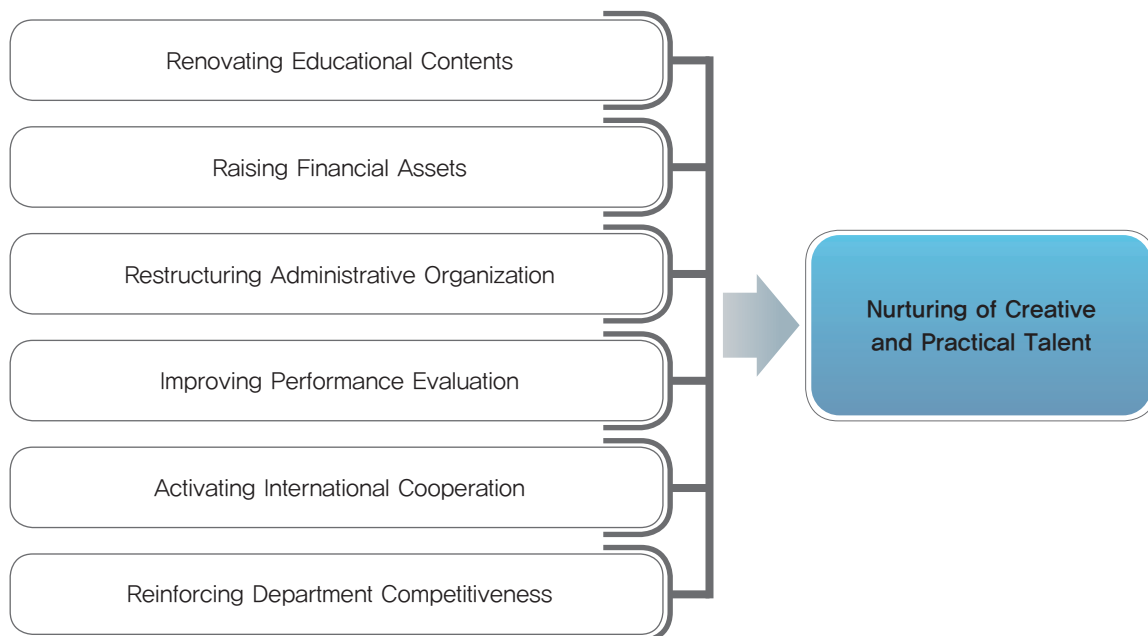
Educational Objectives

1. To nurture diligent, dedicated, and highly motivated individuals.
2. To implant a firm sense of philanthropy for the benefit of society.
3. To nurture professionals who are readily adaptable to international settings and who possess the competence needed to thrive in information-based societies.
4. To produce practically minded and talented experts who can apply their knowledge to society.
5. To train global leaders who are capable of succeeding in the international community and who can effectively cooperate with global experts and organizations.

Mission & Vision



6 Strategic Tasks

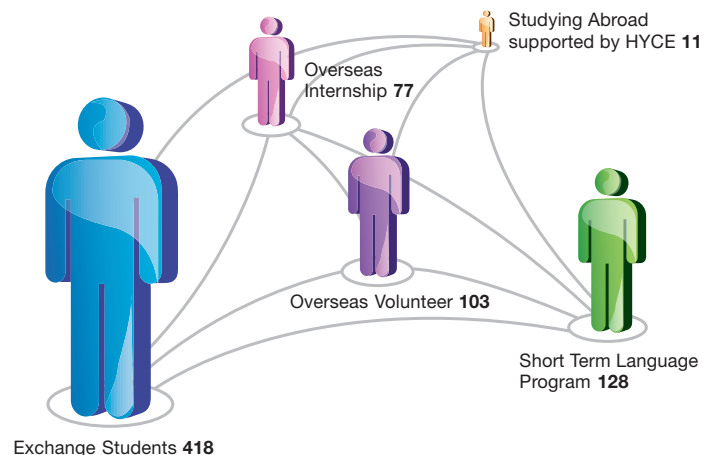


HYCE's Status

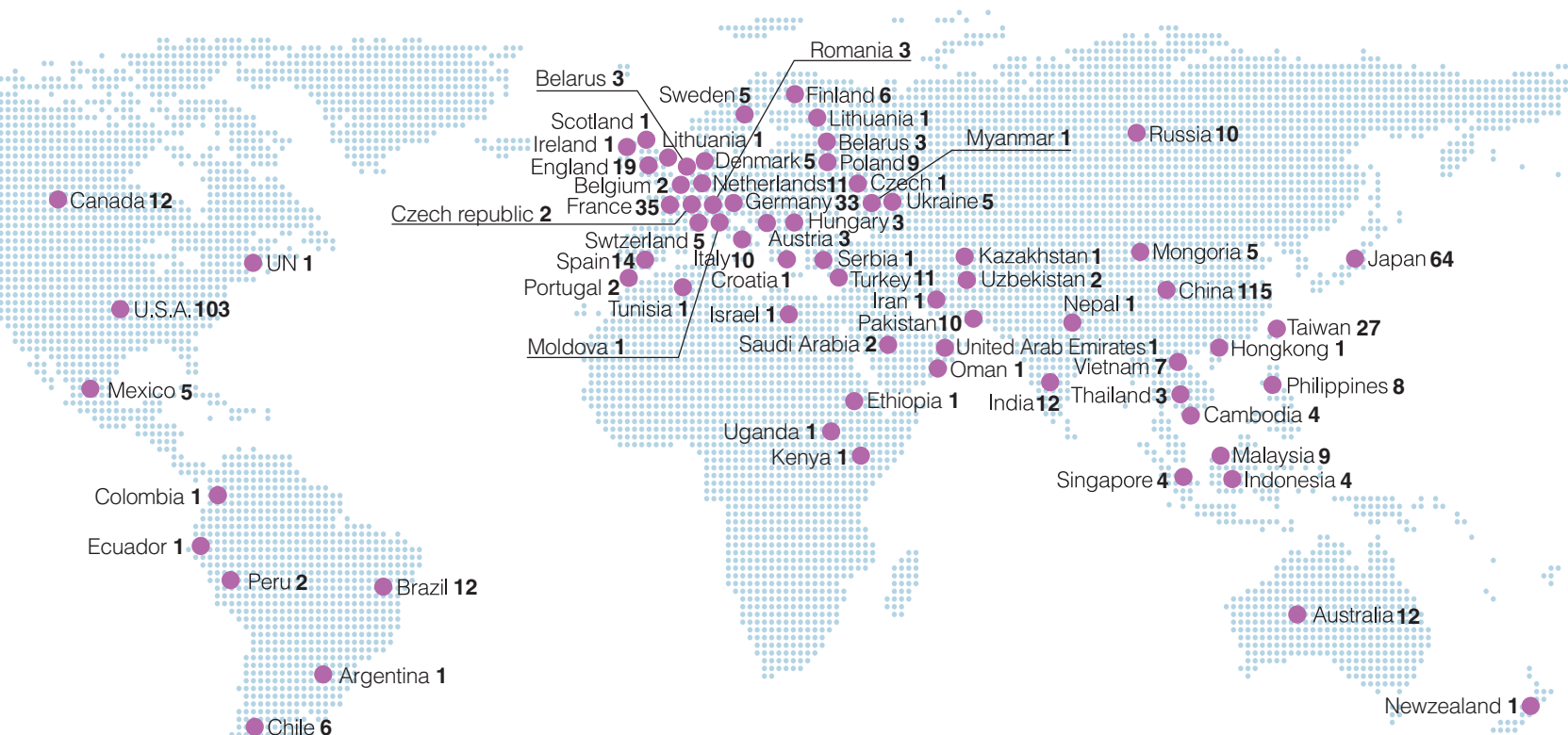
Infinite driving force challenging the world, the global Hanyang College of Engineering

Hanyang College of Engineering challenging the goal to be ranked within 100 global Universities uses its best efforts in various fields of activities in order to globalize the college. Currently, Hanyang College of Engineering has been twinned with 446 famous overseas educational institutions in total 54 countries over the world (as of April 2014) and develops various exchange activities including exchange of professors and students and holding international seminars. The University will continue to invest much time, effort, and expense to promote Hanyang's name at home and abroad.

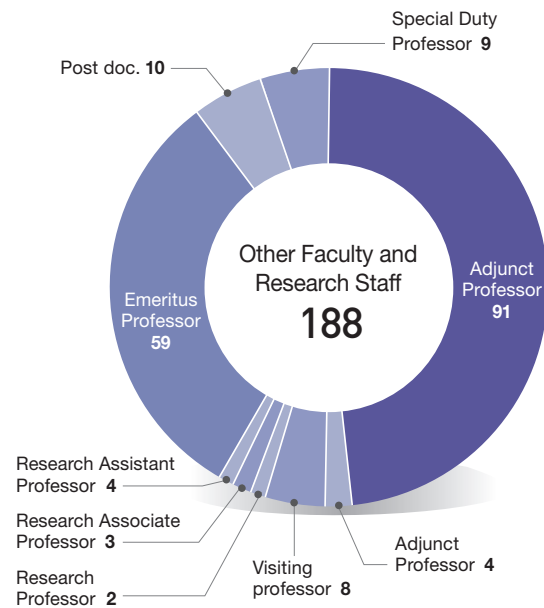
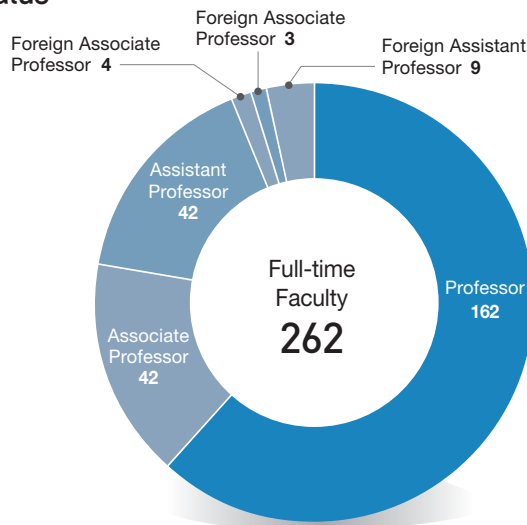
■ International Cooperation



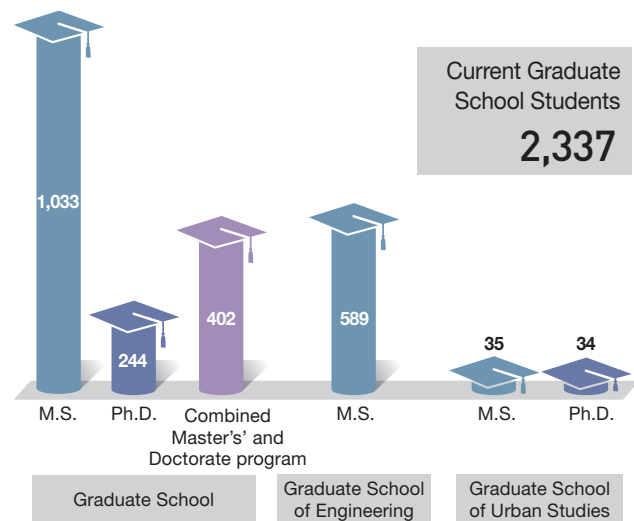
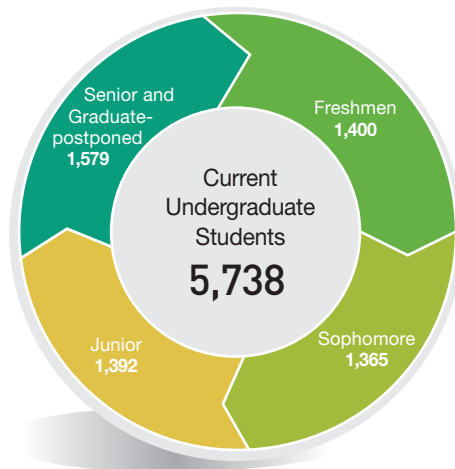
〈Status of Dispatch related International Exchange Program〉



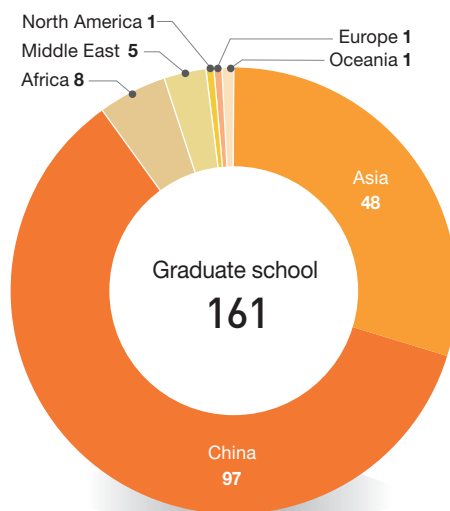
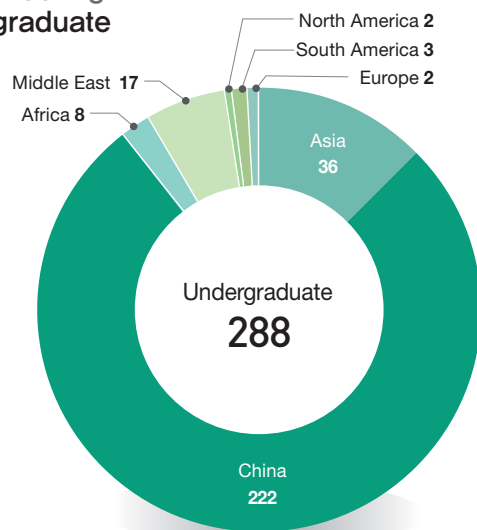
College of Engineering Faculty Status



College of Engineering Student Status



College of Engineering Foreign Undergraduate Student Status





Research Funding (As of 2013)

[In US\$]

Hanyang Grants	3,765,651	
External Grants	Government	53,116,153
	Industry	7,496,632
	Others	1,468,943
	Subtotal	62,081,728
Total	127,929,107	
Grants per faculty (professor)	595,019	

Research Publications Records(As of 2013)

	Domestic	International
Academic Journals	237	1043
Proceedings	437	332
Comments/Reviews	3	6
Others	27	221
Total	704	1272
Publications per Professor	3.27	5.91

Number of Patent Application and Registration (As of 2013)

	Domestic	International
Patent Applications	476	152
Registered Patents	252	54

Technology Transfer Records

[In US\$]

	2013	2014
Number of Contracts	38	50
Amount	2,917,000.44	2,566,525.57



COLLEGE OF **ENGINEERING** HANYANG UNIVERSITY

- 12 _ School of Architecture
- 13 _ Department of Architectural Engineering
- 14 _ Department of Civil and Environmental Engineering
- 15 _ Department of Urban Planning and Engineering
- 16 _ Department of Natural Resources and Environmental Engineering
- 17 _ Department of Electronic Engineering
- 18 _ Division of Computer Science and Engineering
 - Major in Computer Engineering
 - Major in Software
- 20 _ Department of Electrical Bio_engineering
 - Major in Electrical Engineering
 - Major in Biomedical Engineering
- 22 _ Department of Information System
- 23 _ Division of Materials Science and Engineering
- 24 _ Division of Chemical Engineering and Bio Engineering
 - Major in Chemical Engineering
 - Major in Bio Engineering
- 26 _ Department of Organic and Nano Engineering
- 27 _ Department of Energy Engineering
- 28 _ School of Mechanical Engineering
- 29 _ Department of Nuclear Engineering
- 30 _ Department of Industrial Engineering
- 31 _ Department of Automotive Engineering
- 32 _ Department of Applied Systems

Department of Architecture for the Advancement in Architectural Design and Theory

Architecture is a work of manifestation into reality and a syndication of physical environment for the survival of human being.

An education of architecture requires broaden insights on history and society in order to comprehend how mankind him/her-self have regulated through spaces. Also, it demands acquisition of various capacities that leads to concrete an ingredient of matter and an epidemiological behavior for practice and propose alternatives of human spaces.



Training professional architectural engineers with the best education in variety areas of sustainable buildings

This program emphasizes the application of scientific and engineering principles of the planing, design, construction of buildings and building systems. The goal of the program is to provide students with the best education available for careers especially in the sustainable building professions. Graduates will have the ability to practice as professional architectural engineers in a broad area, of planing, design, construction management, and building systems.

The program has been accredited by Korean Engineering Accreditation Commission, ABEEK, and also, satisfied with ABET requirements. The department is supported by the Brain Korea 21 program, a government funded graduate school level program.



AD ASTRA PER ASPERA

The Department of Civil and Environmental Engineering strives to educate the next generation of global leaders in engineering and science, who will work at the forefront of their fields to ameliorate the world with a combination of problem-solving and creativity.

The Latin motto 'Ad Astra Per Aspera' which means 'through hardships to the stars' best describes our department. Civil and Environmental Engineering is no doubt a challenging field of study, but through collaborations and hard work, the students will come to appreciate the 'star' of their engineering education – their positive impact on industry and society.



Fostering creative, practical,
professional, and well-rounded talent
in order to produce future leaders of
the field

Department of
**Urban Planning
and Engineering**

The Department of Urban Planning at Hanyang University was founded in 1968 during the nation's drive of economic growth and urbanization.

The department has participated in numerous urban planning and design projects actively. Students of the department can choose one from a variety of specialties including urban planning, urban design, quantitative analysis for spatial and environmental planning, transportation, urban and real estate development, and so on.

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hyurban.hanyang.ac.kr

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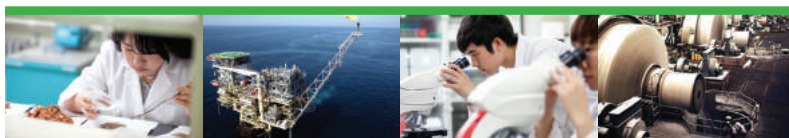


Teaching, research and service in the area of exploration, production and transformation of energy and mineral resources for a resource secure future

The Hanyang University's tradition of excellence in Natural Resources and Environmental Engineering education dates back to 1939. The Department is consistently rated among the top energy resources engineering programs in the country. As a leading institution in earth resources engineering, the Department

has attracted an eminent faculty. Two faculty members have served as president of KSGE and one is a member of Korea Academy of Engineering. Strong traditions, commitment to student success and responsiveness to industry needs give the Department its distinctive character.

In addition to a unique teaching perspective, the Department has a very strong research program that is supported by both industry and government sources. Undergraduates have the opportunity to participate in research programs alongside graduate students.



Go! Beyond IT Technology, Growth Engine of Fusion IT Technology, HYU EE!

Department of
**Electronic
Engineering**

Recent IT technologies are the core foundation and/or crucial parts in Korean major industries such as smartphone/tablet PC, 3D-TV/Smart TV, Bio/u-Healthcare, nextgeneration semiconductor, futuristic game consoles, robots, broadcast/communication, futuristic cars, shipbuilding, space/aviation, construction, energy, environment, and military defense.

Based on these technologies, department of electronic engineering, a specialized DIAMOND department aiming at fusion of electronics technologies, has been a cradle of topnotch IT engineers with the generous support from large companies such as Samsung, LG, Hynix and so forth. In fact, typical electronics engineering fields such as nextgeneration communication, signal processing, semiconductor, and display are fused with practical computer engineering fields to give birth to a world-class FUSED curriculum, with which creative and well-trained engineers are educated, who will be actively participating in the core growth engine for Korean industry. The undergraduate curriculum encompasses not only courses for basic principles but also courses for practical applications of principles on top of our interdisciplinary and FUSED academic character. Most core courses contain a lap or design portion in order to give students a chance for developing creative problem solving skills.

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electronic.hanyang.ac.kr

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Division of Computer Science and Engineering

Major in Computer Engineering

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electronic.hanyang.ac.kr

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Cultivate future-oriented professionals, leaders and contributors to development of the world's computer engineering technology

Computer engineering is the study of contents associated with processing information using computers with the purpose of learning and developing techniques as well as to applying them in diverse areas. Thus, computer engineering is an extensive and complex area of study that includes knowledge and skills in science as well as engineering.

The purpose of the department is to cultivate creative and practical professionals with strong communication skills and global awareness. Our graduates possess the social and technical knowledge to meet industrial demands and dedicate themselves to the development of the world's computer industry.

The Division of Computer Science and Engineering holds competitive research groups in research areas including computer and embedded systems, database, computer networks, algorithms, artificial intelligence, image processing and related fields.



Developing software professionals who lead the process of delivering new creative high-tech products

Major in Software

Software performs the function of the computer system it runs on, solves complex scientific problems, controls cutting-edge hardware. Laborious jobs which were manually done traditionally has been automated. In addition to such conventional applications, software technology came to occupy an indispensable place in the communication and knowledge acquisition processes of human beings. The retrieval of high-quality information from large quantities of data enabled innovative services and businesses which are based on processed information. To develop the the finest software professionals who lead such a rapidly changing market, the major in software provides the differentiated curriculum subjects ranging from fundamental theories and applied sciences related to computer engineering to creative problem solving techniques. Through the courses, projects, and the standard processes of students administration and enforcement, undergraduates are developed to have the ability to make decisions, drive change and create value.

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cs.hanyang.ac.kr

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Understanding the engineering and scientific foundations required to electrical engineers and moving forward

The Major of Electrical Engineering deals with power electricity, power systems, electric energy applications and conversion, plasma applications, electric properties and materials, and systems control.

The students will learn the generation, conversion, transmission, consumption and control of electrical energy, the only viable solution to our future energy needs.

This major aims to cultivate experts in these fields who will continue to contribute to the advancement of our nation.

The Major has long contributed to industrial development in Korea and aims students to become one of the world-leading specialists having creative mind and organizational power.



Cultivating professional engineers and researchers in the advanced technology fields of biomedical engineering

Major in Biomedical Engineering

The mission of the Department of Biomedical Engineering in Hanyang University is to make new scientific discoveries and to cultivate well-educated engineers in the fields of biomedical engineering, which is an emerging interdisciplinary field combining IT, BT and NT. Our missions of making a pioneering scientific discoveries and raising future leaders in the biomedical engineering fields will contribute to an improvement of medical and biological technology in the twenty first century. The Hanyang BME has grown into one of the country's most renowned BME departments in terms of the quality of education and impact of scientific innovation. Our department serves to administer biomedical engineering degree programs at all levels (Bachelor's, Master's, and Doctoral programs). Whether you are a prospective undergraduate, graduate, or postdoctoral student, or a prospective faculty member, the Hanyang BME is an excellent choice for biomedical engineering research and education.

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bme.hanyang.ac.kr

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Next generation global management leader with highly-specialized skill

The Department of Information System was established to provide a undergraduate and graduate education for the application of Information Systems (IS) and information resource management within business and government organizations.

In order to meet the explosive demands for highly-skilled IS professionals, and to cater to the needs of a creative leader in an information society, the Department of Information System has developed a unique program that accommodates a variety of informationrelated skills and the knowledge needs for an information society.

www.hanyang.ac.kr/code_html/H3HADE/



Materials, the Fundamentals of Advanced Technologies

Students in the Division of Materials Science and Engineering start by learning the basic principles of materials science and continue on to develop the skills needed to optimize properties for different classes of materials. Materials science is highly specialized yet also a truly interdisciplinary field of study, encompassing fundamental sciences and nearly all engineering disciplines. The division is built around traditional fields and yet diversified enough to address the interdisciplinary nature of the field and new emerging fields such as nanotechnology. In addition to the rigorous academic program, the division also provides practical training essential for today's materials engineers. The division was established in 1960 as the Ceramic Engineering Department and thereafter, the Departments of Metallurgical Engineering and Materials Engineering joined in 1963 and 1965 respectively. These three departments were unified into a division in 2005. The division is composed of 20 faculty members, 135 graduate students, and 600 undergraduate students. The students will study basic material science for semiconductor materials and devices, metals, energy materials, display devices, bio-materials, and materials and devices for information and communication systems, etc.



Division of Chemical Engineering and Bio Engineering

Major in Chemical Engineering

chemeng.hanyang.ac.kr

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Training global leaders and experts in chemical engineering

The department of chemical engineering in Hanyang University deals with the manufacture of chemicals, the operations of chemical and biological processes, the conversion of raw materials into finished products, the advanced technologies in fuel cells, biosensor, and surfactant, and the use of inorganic and organic industrial chemicals such as petrochemicals, fertilizers, acid-alkali, rubber, synthetic fibers, bio sensors, fine chemicals, ceramics and fine polymers. The professional graduates from the department have contributed greatly to the industrial development of this field and of the nation.



Training the leading players for bio-oriented society

Bio-engineering, together with information technology and nanotechnology, is one of the leading players for the next-generation forces of economic growth.

With the advantage and pride of Hanyang college of engineering the department of bioengineering aims at nurturing the world-class talents of bio sciences with senses of engineering.

Major in Bio Engineering

bioeng.hanyang.ac.kr

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Fusion Technology Opening the New Research Era of Polymers and IT/NT/BT/ET

Organic and Nano Engineering is known as a 'fusion technology' of polymer engineering and the four major areas of IT (information technology), NT (nano-technology), BT (biotechnology), and ET (environmental technology). Our department provides a variety of interdisciplinary research opportunities to study organic nano materials and its applications to information-related areas (transfer/display/storage systems), energy-related areas (transfer/transformation/storage systems), highly advanced functional polymers (such as electroconducting/ biodegradable/intelligent/ emotional polymers), and biorelated materials. Our faculty members have been carrying out cuttingedge research which contributes, together with the introduction of the new 4T technologies (IT, NT, BT, and ET), to the creation of this new research paradigm in polymer engineering



Training world-leading specialists in every field of energy

The Department of Energy Engineering is a critical new field using applied fusion sciences which systematically combines fundamental science expertise from various fields of engineering. This program will use and develop interdisciplinary theories and technologies blended with nano-technology and environmental technologies rooted in physics, chemistry, materials sciences & chemical engineering with new energy production, storage and application systems.

Through its advanced education and development of research capabilities, the mission of the WCU Energy Engineering department is to develop world-leading specialists in every field of energy.

Department of
**Energy
Engineering**

energy.hanyang.ac.kr

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Aiming to educate and research for the 21st century high-tech industry

Mechanical Engineering is an applied science for the analysis, design, manufacturing, control and maintenance of mechanical systems. It requires a solid understanding of mechanics, thermodynamics, energy, control and design. Mechanical engineers employ these knowledge to design and manufacture several mechanical products such as automobiles, robots, home appliances, industrial plants, manufacturing machines, spacecraft and bio-medical devices and so on.



Dedicated to the Generation of Safe and Clean Nuclear Energy

The Department of Nuclear Engineering at Hanyang University established the first nuclear engineering program in Korea in 1958.

Since then, a body of our alumni has grown steadily reaching over the number of alumni as 2,000 undergraduates and 400 graduates.

Our undergraduate and graduate programs have enabled Korea to become the 5th in world nuclear power generation capacity and the third exporter of the commercial nuclear power plant. We take pride in that our program comes along with the history of nuclear research and industry and stretches out to the contribution of nuclear power plant export.

Department of
**Nuclear
Engineering**

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nuclear.hanyang.ac.kr

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Fostering professional industrial engineers providing optimal solutions, making information and knowledge, leading the industry and improving quality

Our department, established in 1958, is the first institution of high-level education on Industrial Engineering (IE) in Korea. Among others in the College of Engineering, It's the only department that provides education and research results on various system optimization and information management techniques. Detailed education and research areas include total quality management, human factors/ergonomics, CAD, bio-informatics, operations research, technology management, production and operations management, logistics management, applied probability and statistics, cognitive science and engineering, knowledge management, data mining, etc.



Design Your Future!

The Department of Automotive Engineering was established in 2011 to meet the new paradigm of automotive technology and to educate the multidisciplinary engineers who will lead the convergence technology in the future.

The main issues for this century's automobiles are environment and human friendly technology including intelligent vehicles, hybrid cars, electric cars, and fuel-cells.

Department of Automotive Engineering is focusing on educating creative engineers with multidisciplinary technology and global standard. It's faculty has diverse experience in academia and automotive industry.

Department of
**Automotive
Engineering**

ae.hanyang.ac.kr:8001

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The forest and the trees in the eye that can see both Technology and develop innovative technologies for convergence era To train professionals practice power

The department of Applied Systems provides education and research associated with solving problems through the application of scientific and practical knowledge. To provide the strong programs, we integrate four basic disciplines: system engineering, information technology, design principle, and management of technology.

Our program is unique, because we not only stress the academic knowledge that may be required for the next generation of industrial and systems engineers, but also practical job skills because our undergraduate students are in work-study bachelor's degree program.

cpsys.hanyang.ac.kr

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CAMPUS VIEW



- | | | | |
|---|---|---|--------------------------------------|
| 01 Administration Building | 24 College of Medicine Lecture Hall | 42 Alumni Association Building | 100 Fusion Technology Center |
| 02 Student Welfare Building | 25 Hanyang University Medical Center East Wing | 43 College of Education Annex | 101 Civil Engineering Building |
| 03 Paiknam Academic Information Center and Library | 26 Paiknam Concert Hall | 44 Hanyang University Medical Center Parking Lot I | 102 Hangwon Square |
| 04 College of Social Sciences | 27 Engineering Building II | 45 Hanyang University Medical Center West Wing | 126 Amphitheater |
| 05 Engineering Building I | 28 Hanyang Women's College Early Childhood Education Center | 46 R and D Building | A Track and Field |
| 06 College of Humanities | 29 Hanyang University Medical Center New Building | 47 College of Law II | C Tennis Courts |
| 07 College of Medicine | 30 Hanyang Women's College Food and Nutrition Center | 48 Hanyang Institute of Technology | D Aegimoon(Subway Exit NO.2) |
| 08 College of Medicine I | 31 Hanyang Women's College IT and Culture Center | 49 Hanyang University Medical Center Parking Lot II | E Front Gate |
| 09 College of Medicine II | 32 Olympic Gymnasium | 50 Student Residence Hall III | F Former Front Gate |
| 10 College of Music West Building | 33 Engineering Center Annex | 53 Hangwon Park | G Rear Gate I |
| 11 Graduate School, Civil Engineering Building | 34 College of Human Ecology | 58 University Post Office | H Rear Gate II |
| 12 College of Education | 35 Hanyang Women's College Library | 74 Convenience Store at the Academic Information Center and Library | I Hospital Entrance |
| 13 Engineering Center | 36 College of Natural Sciences | 75 Hanyang Cyber University | J Hanyang Women's College Front Gate |
| 14 Advanced Materials and Chemical Engineering Building | 37 College of Law I | 77 Information and Communications Building | |
| 15 Hanyang University Medical Center | 38 Hanyang Women's College Plastic Art Center | 88 College of Law III | |
| 16 R.O.T.C. Headquarters | 39 Student Residence Hall II | 89 Business Administration Building | |
| 17 Business and Economics Building | 40 Engineering Science and Technology Building | 90 Administration Building (NEW) | |
| 18 Student Union | 41 Hanyang Women's College Faculty Research Building | 91 Student Residence Hall II-A | |
| 19 Hanyang Women's College | | 92 Student Residence Hall II-B | |
| 20 Hanyang Primary School | | 94 Hanyang Techno Residence Hall | |
| 21 College of Music East Building | | | |
| 22 University Museum | | | |
| 23 Student Residence Hall I | | | |



The Engine of Korea

HANYANG UNIVERSITY

The Proud of Korea and the Growth Engin
of Nation's Development





HANYANG UNIVERSITY