Korea Science Academy of KAIST
2024 School Profile

Address: 105-47 Baegyanggwanmun-ro, Busanjin-gu, Busan 47162, Republic of Korea
Tel: +82-51-606-2186 | Fax: 82-51-606-2157 | Website: https://ksa.hs.kr/Eng
CEEB: 682023

Korea Science Academy of KAIST (KSA) is a prestigious institution located in Busan, South Korea, dedicated to nurturing scientifically gifted students. Affiliated with the renowned Korea Advanced Institute of Science and Technology (KAIST), KSA offers a rigorous curriculum focused on science, technology, engineering, and mathematics (STEM). It provides advanced research opportunities and state-of-the-art facilities, fostering creativity and critical thinking. Admission to KSA is highly competitive, with an acceptance rate of around 10%, targeting students with exceptional talent in science and mathematics. The majority of KSA students go on to pursue further studies at top universities in Korea or abroad.
Notably, students who have been admitted to and enrolled in prestigious universities abroad have demonstrated exceptional capabilities in academics and research, with many going on to attend top graduate schools. KSA alumni are making significant contributions in both academia and industry.

Vision / Mission / Core Values
- **Vision:** A community of inquiry opening the future of science and technology
- **Mission:** To foster global science leaders committed to creating a prosperous future together
- **Core Values:** Innovation, collaboration, coprosperity

About Us
1) History
- The first national science academy for gifted students in Korea
- The only secondary school supported by the Ministry of Science and ICT

Korea Science Academy of KAIST (KSA) was officially designated as the nation's first school for science-gifted students in 2003. In 2009, it became affiliated with Korea Advanced Institute of Science and Technology (KAIST), a world-class university in science and technology. With strong support from KAIST, KSA is dedicated to nurturing future global leaders in science. As the only science-gifted institute fully funded by the Ministry of Science and ICT of Korea, KSA strives to achieve global recognition as a premier institution for nurturing excellence in science education.

2) Level: Secondary School
- Senior high school for specialized education for science-gifted students (Grades 10 to 12)
- Number of teaching faculty: 64
  ※ All of the math and science teachers have Ph.D. degrees.
- Academic year system: Semester system
  - Spring semester: Feb.-Jun.
  - Fall semester: Aug.-Dec.
- Size of graduating class: 121 (as of Feb. 2024)

3) Enrollment (As of Jun. 2024)
- Grade 10: Total 135 (Male 108, Female 27)
- Grade 11: Total 139 (Male 108, Female 31)
- Grade 12: Total 131 (Male 100, Female 31)

※ Including 29 International students

Admissions
The admissions process run by Admissions Office includes a comprehensive assessment of giftedness, creativity, and problem-solving skills.
- Stage 1: Document Evaluation
- Stage 2: Written Test (Math and Science)
- Stage 3: Interview

※ Acceptance rate: 10.4% (in 2024)
※ International admissions process is run separately.

College Matriculations (Class of 2024)
1) Domestic
- KAIST: 69 (57%)
- Seoul National University: 24 (20%)
- Others: 28 (23%)

(POSTECH, UNIST, Yonsei Univ., Korea Univ., and etc.)

2) Overseas (2005~2023)

Country	Name	Admitted
U.S.	Harvard Univ.	4
	Yale Univ.	3
	MIT	3
	Princeton Univ.	3
	Stanford Univ.	8
	Brown Univ.	5
	Caltech	4
	Columbia Univ.	12
	Cornell Univ.	4
	Others	38
	U.S. Total	*84*
U.K.	Univ. of Oxford	11
	Univ. of Cambridge	9
	Others	5
	U.K. Total	*25*
Others	-	11
	Total	**120**

※ Only a handful of students apply to universities abroad, resulting in a low number of admitted students.

Curriculum Overview
1) Curriculum Organization

Academic Courses (144 credits)	• Natural Sciences (76) • Humanities (60) • Convergence (8)
Creative Research Activities (30 credits)	• Creative Basic Research (6) • Self-directed Small Group Research (16) • Graduation Research (8)
Leadership Activities (300 hours)	• Career Development (min. 60 hours) • Cooperation (min. 60 hours) • Global Citizenship (min. 60 hours)

2) Placement Test (PT)
Freshmen who pass the PT can obtain credits without taking classes.
※ Applicable: Mandatory courses for grade 10

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3) KSA Advanced Placement (KSA AP)
In pursuit of rigorous academic opportunities, we offer about 50 AP and higher level courses in math and science, allowing students to earn credits recognized by KAIST, POSTECH, UNIST, DGIST, and GIST.

• **Description of Course Level**

Course No.	KSA of	U.S. Equivalent
1000-2000 *100-200	Level 1 (L1)	Honors Level (HNR)
3000 *300	Level 2 (L2)	Advanced Placement Level (APL)
4000-6000 *400-600	Level 3 (L3)	2nd Year College Level (CL2)

4) KAIST Honors' Program (HP)
We offer a dual enrollment program in collaboration with KAIST. Selected senior students can take courses at KAIST and earn credits.

Grading System & Class Rank

A+	A	A-	B+	B	B-	
4.3	4.0	3.7	3.3	3.0	2.7	
C+	**C**	**C-**	**D+**	**D**	**D-**	**F**
2.3	2.0	1.7	1.3	1.0	0.7	0.0

* P: Pass / F: Fail

• We calculate **unweighted GPA.**
• We **do not release students' ranks** because our students take classes tailored to individual academic interests and needs.

Creative · Innovative Convergence Education

1) Dream Design Center (DDC)
DDC is an innovative space where students can turn their ideas into reality using advanced tools such as laser cutters, 3D printers, CNC lathes, and 3D scanners. With a wide range of tools for prototyping and fabrication, it enables students to develop their concepts from initial sketches to polished, final products.

2) Creative Engineering
Topics covered include energy, nanoscience, space science, robotics, biotechology, AI, quantum science, and etc.

3) Convergence Education
Integrated education of math, science, humanities, and arts

Creative Research

Grade 10	Creative Basic Research - Creative Design Activity - Basic Research Methodology Seminar
Grade 11	Self-directed Small Group Research - Research & Education (R&E)
Grade 12	Graduation Research - Individual research or KAIST HRP

1) Grade 10: Creative Basic Research
• Goal: To develop creative problem-solving and basic research skills

2) Grade 11: Self-directed R&E
• Goal: To experience advanced research by participating in a small group research project for one year and writing a research report under the guidance of their advisors (KSA teachers, university professors, and researchers)

3) Grade 12: Graduation Research
• Goal: To conduct individual research and complete a graduation thesis
• High School Research Program (HRP)
Performing research and writing a thesis over one regular semester and 30 days of intensive research period during the summer break under the guidance of KAIST professors

Globalization

1) Various Programs with 23 Institutions in 13 countries including the U.S., U.K., Japan, Singapore, Thailand, and etc.

2) Exchange Program
• Study Abroad Program
- 13 institutions from 5 countries (U.S., U.K., Germany, Canada, and Israel)
• International Collaborative Research
- 6 teams with 4 institutions from 4 countries
• Teacher Exchange Program
• Student Exchange Program
- 6 institutions from 5 countries
• International Conferences and Science Fairs

3) Global Education
• International Students
- Admitting international students since 2010
- 29 students from 12 countries (as of Jul. 2024)
• Lectures offered in English
• English Communication Center (ECC)

4) KSA Science Fair (KSASF)
• Biennial International Event
• KSASF 2023: About 130 participants from 28 institutions in 20 countries

Leadership and Community Service

KSA students participate in a variety of school activities to become more versatile and well rounded, learning teamwork, leadership, and responsibility which are basic and essential assets as future global leaders.

1) Mandatory Requirement for Graduation
Minimum 300 hours of leadership activities are required for graduation

2) Clubs and Research Groups
Around 20 clubs and 70 research groups to choose from

3) Community Service
• Talent donation for local community
• Math/Science camp for underprivileged residents
• KSA Orchestra Concert
• KSA Starlight Festival (Public Astronomical Observation Event)

4) Festivals Run by Students
• Spring: Science Academic Festival (SAF)
• Fall: Science Adventure Celebration (SAC)

Contact Us

For additional questions, please email
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Math and Science Courses at KSA

Type		Mathematics and Computer Science	Physics and Earth Science	Chemistry and Biology
Core (Required) Courses (1000)		Mathematics1(4) Mathematics2(4) Calculus1(4) Calculus2(4)* Computer Science1(2) Computer Science2(2)	Physics and Exp.1(3) Physics and Exp.2(3) General Astronomy(3)** General Astronomy Lab(1)** General Earth Science(3)** General Earth Science Lab(1)**	Chemistry and Exp.1(3) Chemistry and Exp.2(3) Biology and Exp.1(3) Biology and Exp.2(3)
Subtotal		**20**	**10**	**12**
		42		
Intensive (elective) courses	Liberal arts electives (2000)	Mathematics3(3) Application of Mathematics(3) Computer Science3(3)	Project Physics(3) Elementary Physics(3) Basic Astronomical Observation(3) Earth and Environmental Sciences(3)	Chemistry in Life(2) Exploring into Life Science(2)
	AP courses (3000)	Calculus2(4) Calculus3(3) Elementary Number Theory(3) Linear Algebra(3) Differential Equations(3) Probability and Statistics(3) Programming and Problem Solving(3) Discrete Structures(3)	General Physics1(4) General Physics Lab1(1) General Physics2(4) General Physics Lab2(1) General Astronomy(3) General Astronomy Lab(1) General Earth Science(3) General Earth Science Lab(1)	General Chemistry1(4) General Chemistry Lab1(1) General Chemistry2(4) General Chemistry Lab2(1) General Biology1(4) General Biology Lab(1) General Biology2(4)
	In-depth electives (4000)	Mathematics Seminar(1) Elementary real analysis(3) Data Structures(3) Algorithms(3) Advanced Algorithms(3) Computer Science Seminar(1)	Introduction to Mechanics(3) introduction to Electrodynamics(3) Introduction to Modern Physics(3) Physics Seminar(1) Weather and Climate(3) Space Science and Lab(3) Stars and Universe(3) Earth Science Seminar(1)	Fundamentals of Organic Chemistry(3) Fundamentals of Analytical Chemistry(3) Chemistry and Energy(3) Introduction to Nanochemistry(3) Spectroscopy(3) Chemistry Seminar(1) Infection and Immunity(3) Basic Brain Science(3) Cell and Disease(3) DNA Science(3) Biology Seminar(1)
	Special courses (5000)	Special Topics in Mathematics(3) Special Topics in Computer Science(3)	Special Topics in Physics(3) Special Topics in Earth Science(3)	Special Topics in Chemistry(3) Special Topics in Biology(3)
Subtotal		**34**		
Total		**76**		

* <Calculus 2 (4)>, <General Astronomy (3), General Astronomy Lab (1)> or <General Earth Science (3), General Earth Science Lab (1)> are both core (required) and AP courses (3000).
** A student must choose one between <General Astronomy (3), General Astronomy Lab (1)> or <General Earth Science (3), General Earth Science Lab (1)> and complete it within four semesters.