



2026 GRADUATE ADMISSIONS GUIDE

for International Students



Unparalleled Education A University with an Innovative Beginning

New Energy Leader
Korea Institute of Energy Technology

Korea Institute of Energy Technology, a Global University for
energy convergence research

It was established to contribute to the national energy industry through energy technology development and to solve the energy problems of mankind. We aim to cultivate creative talents that future society demands. Our professors, students, and researchers work together to accelerate the transition to a clean and safe energy society by researching energy fields and core new technologies. This is the mission of the Korea Institute of Energy Technology.



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Part.

1

Message from President

Overview

Features

Graduate Education

Scholarship and Student Support



Future leaders spearheading innovation in the global energy transition era, Are you ready to dream big with KENTECH?

KENTECH is proud to be the world's only university, small in scale but with considerable intellectual influence, specialized in the energy sector. For those of you eager to lead in the realms of great energy transition as researchers, entrepreneurs, or policymakers, KENTECH is the place to start your journey.

We are at the dawn of a "Great Energy Transition", where the shift in energy paradigms is reshaping our world. Greenhouse gas emission, global warming, and climate crisis threaten our sustainability, signaling a shift from the old saying, "Those who control oil control the world", to "Those who control new energy control the world". As a result, there is a huge global demand for leaders in the energy sector such as researchers, entrepreneurs, and policymakers who can wisely overcome such challenges.

At KENTECH, you will tackle humanity's greatest challenges in relation to energy and the environment, growing into the world's finest researchers, entrepreneurs, and policymakers.

Founded with a belief that "University succeeds when its students succeed", KENTECH has crafted the most innovative curricula and optimal educational and research environments to help you become a creative and problem-solving leader in the field of future energy. Renowned faculty members in critical and future-oriented energy fields including energy AI, advanced new energy materials, grid modernization, hydrogen energy, environmental and climate technologies, as well as nuclear energy including SMRs and nuclear fusion, stand ready to assist you on your journey.

**Future leaders,
We invite you to boldly accept the challenge that awaits you.**

March 2025

Acting President of Korea Institute of Energy Technology





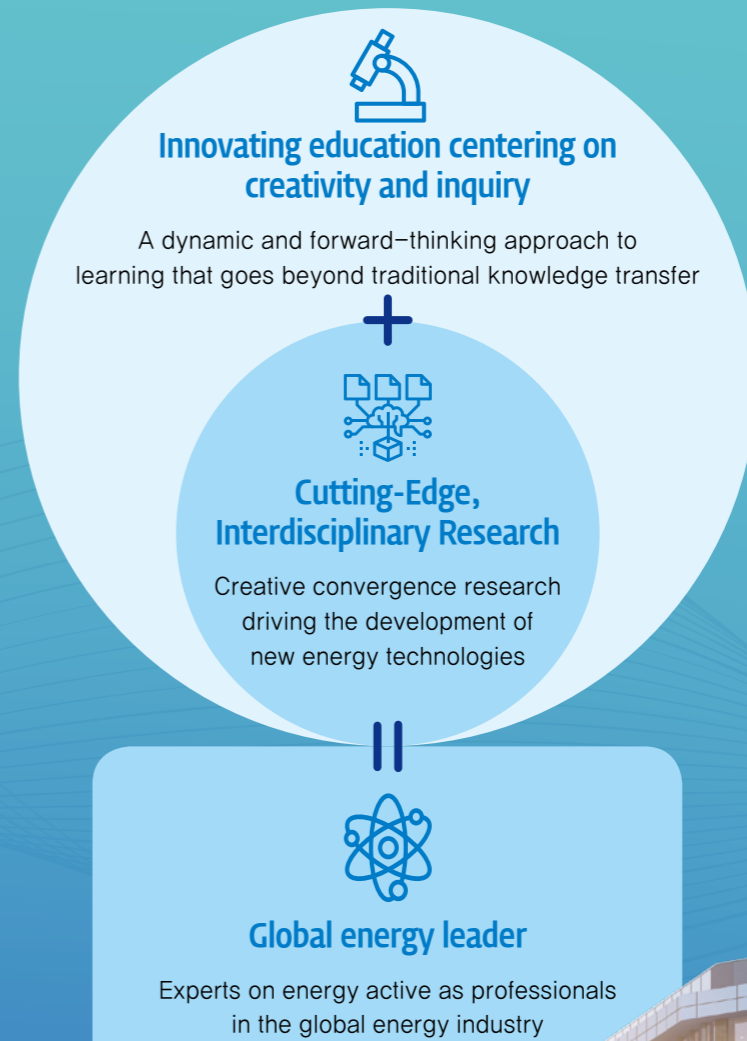
A global university leading the future of energy research with industry-university-research cluster

KENTECH's vision is to grow into a leading university in energy research by forming strategic partnerships with leaders and research institutes in the global energy industry.

KENTECH will endeavor to serve as a hub and platform for global energy researchers and entrepreneurs to come together and share research resources and outcomes, thereby enabling all participating stakeholders to drive energy development and innovation. By recruiting around 1,000 students and 100 faculty members by 2025, we will seek to emerge as a small but strong university focusing on research and development (R&D) in the field of energy development and producing energy industry leaders of the future. In its early stages, KENTECH will form an industry-university-research cluster on campus by attracting large energy research institutions in Korea, through which we will be able to leverage our R&D outputs and help create jobs in the energy industry. KENTECH's academic goal is to become one of the world's top 10 engineering schools in the field of energy by 2050.



A pioneering university that nurtures global energy leaders for a cleaner future





Advancing energy science and technology to benefit humanity, the nation, and the region, while pioneering new frontiers in future energy and climate adaptation



Achieving a top 10 global ranking in energy engineering by 2050

- 01**
Short-Term (Phase 1, by 2030)
Top-tier engineering school in Korea
“Build a strong foundation and strive for growth”
- ▼

02
Mid-Term (Phase 2, by 2040)
Top-tier engineering school in Asia
“Achieve exponential growth through innovative achievements”
- ▼

03
Long-Term (Phase 3, by 2050)
Top-tier engineering school in Asia
“Become a leading global university”





World University Evaluation Index

World University Rankings in the Energy Field Small But Strong University Rankings

1	Phase 1 (by 2030) Top-tier engineering school in Korea TOP 200 / TOP 20	
2	Phase 2 (by 2040) Top-tier engineering school in Asia TOP 20 / TOP 10	
3	Phase 3 (by 2050) Top-tier engineering school in the world TOP 10 / TOP 3	

Rank among Korea's top 10 universities and establish an energy cluster by 2030

Education Drive innovation in engineering education	Research Address grand challenges in the energy sector	Industry-University-Research Cooperation Create a global energy ecosystem
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<p>Become one of the world's top 10 universities specializing in the energy field by 2050</p> <ul style="list-style-type: none"> 1,000 global leaders KRW 100 billion in royalty income 5 unicorn companies in energy 	+	<p>Establish a Global Energy Hub by 2050 From Naju to the World (Glocalization)</p>
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Fostering future energy leaders through innovative education

- ❶ Student-centered, self-directed, open learning
- ❷ Education that promotes the internalization of learning skills
- ❸ A residential college model integrating academics and community living



World-class energy research institute

- ❶ Specialized research in collaboration with leading global energy scholars
- ❷ Producing world-class research, including high-impact publications and patents
- ❸ Top-tier global energy research institute



World-class startup hub for new energy industries

- ❶ Key player in the energy research cluster on campus
- ❷ Approximately 100 industry-academia energy research labs and five prospective unicorn companies
- ❸ Supporting the establishment of 150 companies by KENTECH students and faculty



Individuals with outstanding research capabilities, entrepreneurial mindset, and global citizenship, dedicated to advancing energy for the common good of humanity

Research Excellence
Present new paradigms and undertake new challenges for the future of energy

Entrepreneurship
Drive shared prosperity and generate value for the region, nation, and the world

Global Citizenship
Uphold honesty and integrity while fostering global collaboration

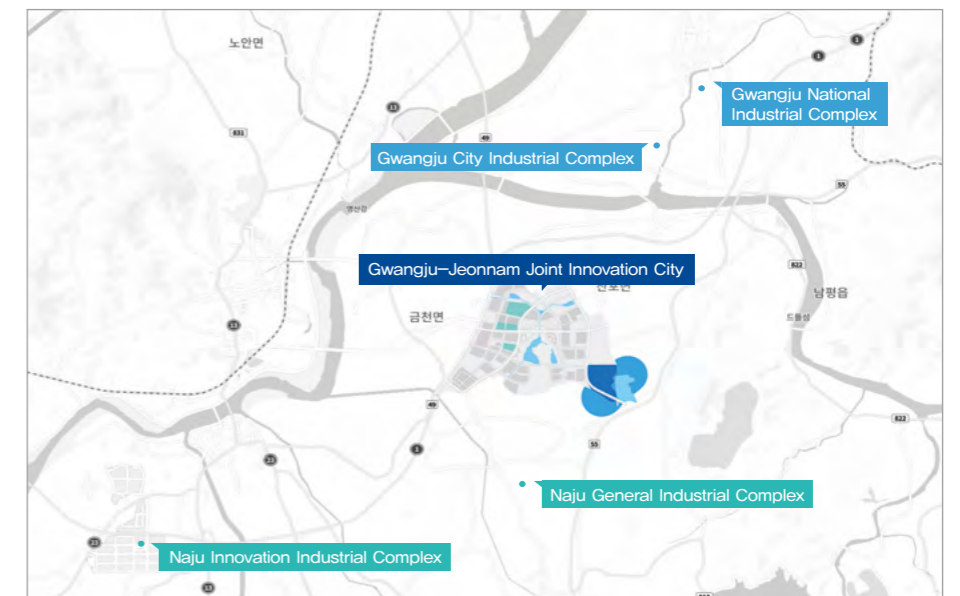
Ideal Qualities Talented individuals with exceptional research capabilities, entrepreneurial spirit, and global citizenship who seek to develop energy for the common prosperity of humanity



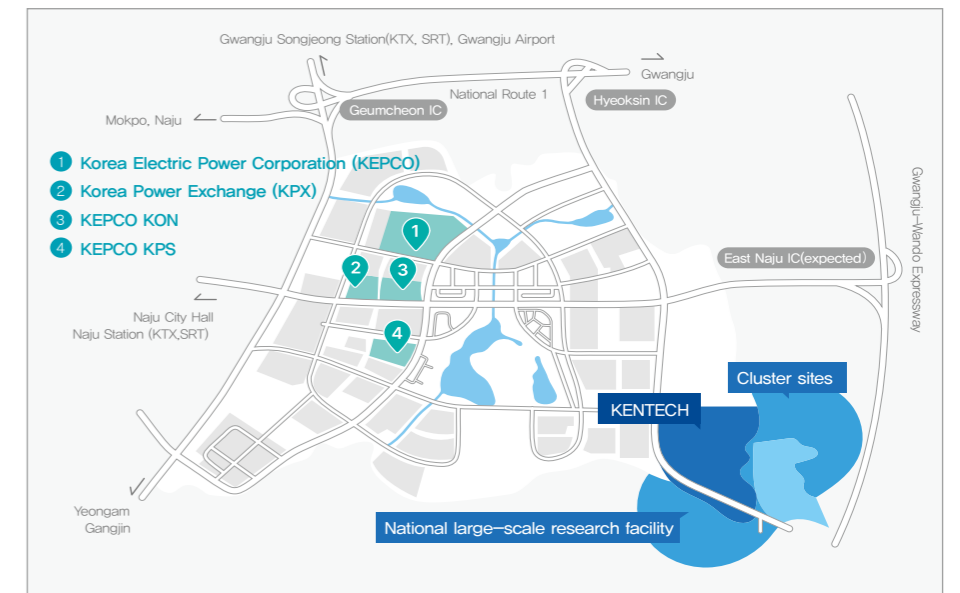
Energy Valley and Gwangju Jeonnam Joint Innovation City

Joint Innovation City Energy Valley is a "Global Smart Energy Hub" that contributes to national economic development and job creation by attracting energy industry-focused companies, research institutes, etc., through cooperation between KEPCO (Korea Electric Power Corporation), local governments, and government support in the Gwangju-Jeonnam Joint Innovation City and nearby areas.

* Energy industry-focused areas: ESS(Energy Storage System), AMI(Advanced Metering Infrastructure), LVDC(Low Voltage Direct Current), HVDC (High Voltage Direct Current), Electric vehicle charging infrastructure, Renewable Energy, etc.



Gwangju-Jeonnam Joint Innovation City is a future growth hub city with 16 public institutions in energy, information communication, and culture and arts, including Korea Electric Power Corporation (KEPCO), KEPCO KPS, KEPCO KDN, and Korea Power Exchange, which have relocated.



International Collaborative Research



Dispatch of Research Personnel to France as ITER Project Associates (IPA)

ITER (International Thermonuclear Experimental Reactor) is a large-scale international joint research and development project currently underway in France, aiming to commercialize nuclear fusion energy. The project brings together seven member entities: Korea, the European Union, the United States, Japan, China, Russia, and India. In June 2024, under the leadership of Professor Byungsu Lim's research team, KENTECH signed a cooperation agreement with the ITER Organization. Through this agreement, the two parties committed to pursuing collaborative research in fusion technology, facilitating the exchange of master's and doctoral-level talent in the field of nuclear fusion, and dispatching specialized personnel

through the ITER Project Associate (IPA) program. Remarkably, within just three months of the agreement, KENTECH successfully dispatched its first researcher, marking a meaningful first step toward substantive cooperation between the two institutions. Moving forward, KENTECH aims to strengthen its competitiveness in the field of nuclear fusion technology both domestically and internationally through continued collaboration with ITER, and to establish itself as a leading institution in the development of future energy technologies.

Partnership with Copenhagen Energy Islands (CEI) for Collaboration in Offshore Energy Hubs, HVDC, and PtX

In November 2024, KENTECH signed a Memorandum of Understanding (MOU) with Copenhagen Energy Islands (CEI) to collaborate in the areas of offshore energy hubs, subsea high-voltage direct current (HVDC) transmission, and Power-to-X (PtX) technologies. CEI is an offshore energy hub development initiative led by Copenhagen Infrastructure Partners (CIP), the world's largest renewable energy investment firm headquartered in Denmark. Based on this agreement, KENTECH plans to engage in joint research during the early development stages of offshore energy hubs and subsea HVDC and PtX systems currently being pursued in Korea. Through this collaboration, the two parties aim to refine the concepts of offshore energy hubs, HVDC, and PtX, and to assess their technical and economic feasibility. Ultimately, the initiative seeks to contribute to building key infrastructure that will support a stable and carbon-free power supply for Korea's high-tech industries.



Partnership with U.S.-Based Deep Fission for Collaboration in Nuclear Energy Initiatives

Deep Fission is a U.S. nuclear energy startup co-founded by world-renowned physicist Professor Richard Muller. The company offers innovative solutions that address one of the most pressing challenges in the industry today—cost reduction. KENTECH has become the first Korean university to partner with a U.S. nuclear energy company, aiming to advance and implement cutting-edge nuclear technologies in both the Korean and global energy markets. In particular, through this collaboration with Deep Fission, KENTECH plans to leverage the company's advanced technological approach, which involves the installation of small modular reactors (SMRs) at a depth of 1.6 kilometers underground—an innovation designed

to enhance both safety and cost-efficiency. The partnership will also focus on research and development for supplying power to data centers across Korea in the future.



Partnership with Stanford Center at Incheon Global Campus (SCIGC) for Education and Research Collaboration

In March 2025, the Korea Institute of Energy Technology (KENTECH) signed a Memorandum of Understanding (MOU) with the Stanford Center at the Incheon Global Campus (SCIGC) to promote joint research and talent development for the establishment and operation of a global AI data center. Through this partnership, KENTECH and SCIGC will collaborate on developing and operating educational programs related to global AI data centers, conducting research and technology development for power grid optimization, and running customized talent development programs. They also plan to initiate

industry-academia joint research projects. By strengthening cooperation with SCIGC, KENTECH aims to lead R&D and education in global energy innovation and digital transformation. The university also seeks to expand collaboration with industry and international partners, contributing to the development of a sustainable, carbon-neutral AI data center model.

Partnership with the Darla Moore School of Business at the University of South Carolina

The Darla Moore School of Business (DMSB) at the University of South Carolina, founded in 1919, is widely acclaimed for its excellence in international business education. The school has maintained a longstanding commitment to cultivating future global leaders through a distinctive integration of innovative academic instruction and practical experience. Following the signing of a Memorandum of Understanding (MOU) in December 2024, KENTECH and DMSB intend to leverage their respective areas of expertise—KENTECH's specialization in energy technology and policy, and DMSB's distinguished capabilities in international business—to engage in collaborative research and develop joint educational programs focused on sustainable energy technologies and global energy policy. Furthermore, the two institutions will actively promote student exchange programs to enhance KENTECH students' knowledge of international energy markets and emerging technologies, thereby supporting their development as globally competent professionals.



Partnership with UCLA Samueli School of Engineering

In March 2025, KENTECH signed a Memorandum of Understanding (MOU) with the UCLA Samueli School of Engineering, a world-renowned institution for engineering education and research, to promote joint research, education, personnel exchange, and the co-hosting of academic events. Through this partnership, the two institutions aim to drive educational innovation by developing joint educational programs and to enhance the international competitiveness of their research personnel by expanding opportunities for graduate students to participate in overseas education and training programs during the academic year and summer sessions. Furthermore, KENTECH seeks to elevate its global standing and strengthen its brand value by activating technology commercialization and policy research based on industry-academia-government collaboration.





Differentiated graduate education

Open Education Centered on Field Issues

“My research field is energy convergence.”

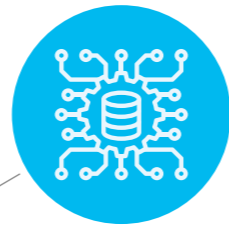
Education of a single department with 12 Major Research Fields

- Graduate students can design their own curriculum by converging their research topic and 12 Major Research Fields

“I learn the latest issues in the research and industrial fields.”

Education based on the latest issues in research and industrial fields

- Learning on the latest issues in the research and industrial fields across the energy field



Self-directed interdisciplinary research

“I have opportunities for independent research.”

Credit-based education system centered on research

- Providing a basis for graduate students independent research through the application of self-directed research credits

Offering research credit courses

- Master Thesis Research, Doctoral, Dissertation Research Graduate Seminar, Independent Study
- Crediting graduate students' exploration of research topics

“I have ample opportunities for global research.”

Global Research (exchange programs with overseas universities / research institutes/companies)

- Providing opportunities for global exchange experiences by conducting research at overseas universities/research institutes/companies



Designing student-centered career paths

“I lead the curriculum I want to learn.”

SDC(Self-directed Curriculum)

- Designing a curriculum for one's career path with the supervising professor's guidance

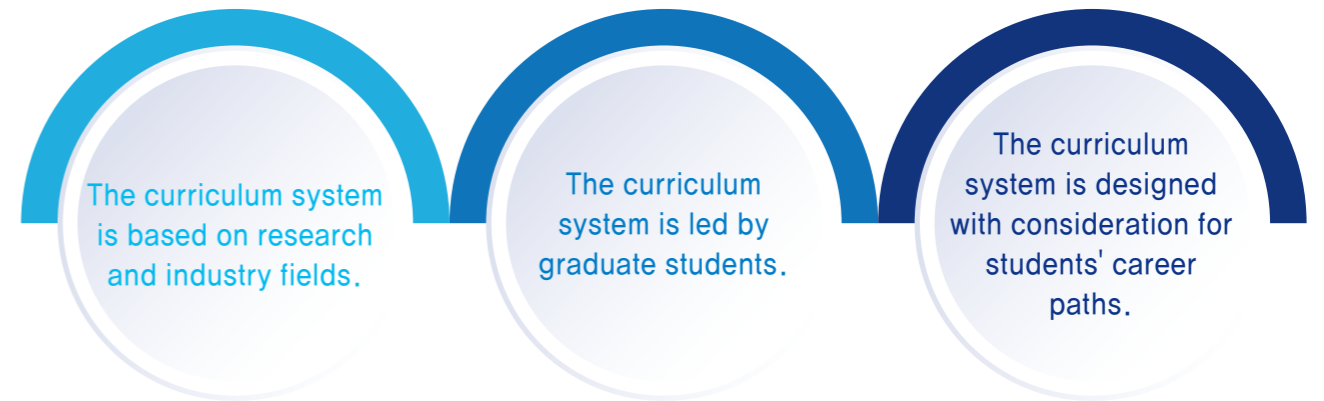
“I design and prepare my own career path.”

Student-led career path education

- Designing a student-led career path throughout the entire education process from convergence to specialization to career path



Background for establishing curriculum



Curriculum

Credits

Category	Master's program	Doctoral program	Integrated Master's and Doctoral program
Total Credits	33	60	60

Education curriculum

Category	Course Field	Remarks
Advanced EL (Energy Literacy)	Fundamental Course	Basic and applied education on 12 Major Research Fields
	Intensive Course	In-depth and concentrated education on specific research fields
Research	Master's Thesis Research Doctoral Dissertation Research Independent Study	Conversion of graduate students' research topics into academic credits
	Gradate Seminar	Inviting Leading Researchers in the Energy Field, Both Domestically and Internationally, to Hold Regular Lectures
Career Path	-	Education for fostering energy industry experts (EP: Energy Professionalism) :Intellectual Property and Strategies, etc. Utilization of edX and Global MOOC education platforms



1. Basic Scholarship

Tuition

Full scholarship (if achieving a grade that meets the selection criteria)

2. Stipends & TA Scholarship

Living Expenses*

Master's degree students: 1,300,000 KRW/month
Ph.D. students: 1,600,000 KRW/month

Educational Material Expenses

Up to 2,000,000 KRW

■ Requirements

- Master's and Ph.D. program: Research assistantship (RA) performance
- For the combined master's/Ph.D. program, living allowances equivalent to those paid to Ph.D. students will be paid starting in the third semester.

TA Scholarship

Ph.D. student: 350,000 KRW/month

■ TA's role

- By supporting instructors in the field of educational innovation at KENTECH, graduate students can gain experience in innovative education while exploring the path of an educator as a TA, and then apply the knowledge and skills they gain in the educational field at a later time.

■ Requirements

- Students in a Ph.D. program or combined master's/Ph.D. program at KENTECH (in the case of master's degree students, TA performance records will be recognized when they advance to the Ph.D. program)

■ Eligibility requirements

- 4 years while they are enrolled in the program.
- Combined master's/Ph.D. degree program students will be paid within 4 years after the third semester.

Housing Support

- All newly admitted students can stay in the dormitory
- Students living in the dormitory receive a monthly housing allowance of 150,000 KRW per month
- Students who do not stay in the dormitory receive 300,000 KRW per month as housing support.

3. Presidential Fellowship for Graduate Students

- Presidential Fellowship for Graduate Students I
 - 30,000,000 KRW
 - International collaborative research(One-year)
- Presidential Fellowship for Graduate Students II
 - 20,000,000 KRW
 - International collaborative research(Six-month)

4. Leadership Scholarship

- Scholarships provided to the members of the Student Council (president, vice president, and representative of each year level)
- 1,000,000 KRW/semester

5. Community Service Scholarship

- Service Scholarship: 300,000 KRW/month
- Based on 20 hours of work per month
- Including mentoring and tutoring activities

6. Other Scholarships

- Need-Based(Disabled) Scholarship
 - Scholarships are awarded to a certain number of students who face financial hardships or have disabilities and are selected according to the degree to which their family is experiencing financial difficulty.
 - Details are determined separately by the KENTECH President.
- Graduate School Excellence Scholarship
 - In order to foster world-class scientists, excellent graduate students recommended by the Academic Affairs Committee are selected to be provided with scholarships.
 - Details are determined separately by the KENTECH President.

7. Dormitory

- Double room: 150,000 KRW per month
- Quad room: 120,000 KRW per month
- On-site student cafeteria and gym facilities are available in the dormitory

12 Major Research Fields

Integrating knowledge from various academic disciplines is essential for developing real-world problem-solving skills. By combining traditional energy majors, we have created 12 distinct energy research fields. These fields allow students from diverse academic backgrounds to enhance their practical energy research capabilities.

5 Concentrations

To adapt swiftly and flexibly to the rapidly evolving energy paradigms—characterized by decarbonization, decentralization, and digitalization—we have established a flexible, integrated undergraduate program structure within the framework provided by the 12 distinct energy research fields. This structure is designed to equip students with a deeper understanding of the latest interdisciplinary and combined energy research and technologies, fostering the development of advanced talent who will lead the future energy sector.

Part. 2

Field of Studies

AI Algorithms and Systems

“AI Algorithms and Systems” field focuses on researching the latest advancements in artificial intelligence, particularly in foundation models, multimodal AI, generative AI, computer vision, natural language processing, reinforcement learning, etc. Key research areas include efficient training and inference optimization for large-scale AI models, integration and performance enhancement of multimodal AI models, utilization and control of generative AI, development of optimization algorithms based on reinforcement learning, and designing AI models with reliability and fairness. Through these, the goal is to advance AI systems to be more powerful and efficient while expanding their applications across various industries and real-world scenarios.

AI research field in KENTECH focuses on pioneering next-generation AI technologies through efficient learning algorithms, high-performance AI infrastructure, and advanced AI modeling and decision-making. The research explores various AI domains, including multimodal AI, generative AI, and reinforcement learning, with an emphasis on developing AI solutions for industrial innovation. Additionally, it aims to design AI systems with reliability and safety in mind, fostering ethical and fair AI advancements.

Through these efforts, KENTECH seeks to maximize AI's industrial applications, enhance global AI competitiveness, and contribute to future technological innovation.



Subfields

KENTECH's AI research actively explores a wide range of cutting-edge AI technologies, including foundation models, generative AI, multimodal models, computer vision, natural language processing, reinforcement learning, robotics, model generalization, model compression, federated learning, few-shot learning, adaptation methods, prompt engineering, etc.

Outlook

The latest AI technologies, driven by advancements in multimodal learning and generative AI, are being increasingly applied across various industries. Companies are actively recruiting talent with expertise in AI model optimization, automation, and ethical problem-solving. The demand for AI professionals is expected to grow even further, with individuals possessing hands-on experience and domain knowledge becoming in high demand.

Potential Career Paths

- Researchers and professors in computer science, artificial intelligence, and data science/engineering.
- Research scientists and engineers in big tech companies.
- Entrepreneurs and founders in the carbon-neutral and energy engineering based on computer science and AI.



Matching with National Strategic Technology Fields

Artificial Intelligence / Cybersecurity / Advanced Robotics and Manufacturing / Advanced Mobility / Aerospace

AI Applications

The field of AI applications is the study of developing innovative solutions by applying artificial intelligence (AI) technology to various areas. The KENTECH department of Energy Engineering is conducting research on AI+X by integrating AI technology into various fields such as energy systems, cybersecurity, robots, vision, AI agents, materials discovery, materials analysis, and autonomous lab.

We rely on core AI technologies including data analysis, machine learning, deep learning, natural language processing, computer vision, and reinforcement learning to automate problem solving and decision making as well as to develop AI applications that can evolve by itself and adapt to the environment.

In particular, KENTECH is also conducting eco-friendly and sustainable technology development such as AI-based energy efficiency optimization and renewable energy management by reflecting the characteristics of the energy industry, and aims to lead the next generation of technology innovation by converging AI technologies across advanced industries such as industrial security, robot automation, and new material design.



Subfields

- AI-based Energy Systems, Vehicles, and Robots
- AI-based Computer Vision and Cybersecurity
- AI-based Discovery of New Materials/Material Analysis Technology
- AI-based Autonomous Laboratory/Digital Planet
- Lightweight Energy AI
- Carbon Zero Data Center

Outlook

The field of AI applications is the core technology of the Fourth Industrial Revolution and is being widely utilized across various industries. The adoption of AI technology is accelerating in areas such as medical diagnosis, autonomous driving, smart manufacturing, financial data analysis, and eco-friendly technology development. With continuous technological advancements, AI is emerging as a promising field that can secure global competitiveness. According to market research, the global AI market size is expected to grow from approximately \$150 billion in 2023 to \$2 trillion by 2030, and the energy AI market is expected to grow from \$8.9 billion in 2024 to \$58.7 billion by 2030.

Potential Career Paths

- AI solution developer
- AI Researcher at government-funded research institutes
- AI-based materials researcher
- Faculty in the departments related to AI and data science
- Faculty in AI integrated interdisciplinary chemistry, materials science, chemical engineering and mechanical engineering research.



Matching with National Strategic Technology Fields

Artificial Intelligence (AI) / Cybersecurity / Advanced Robotics and Manufacturing / Advanced Mobility

Smart Grids and Electric Power Systems

Research on transitioning from the conventional power grid, which was reliant on fossil fuels and centralized supply, to eco-friendly and decentralized power grid is conducted. The goal is to implement future grids that can handle the growth of renewable energy and continuously increasing power demand from data centers and electric vehicles.

This involves research across the entire power grid research, from design to real-time operation. In particular, addressing the change in energy paradigm, such as the increase in distributed energy resources and the introduction of DC grids is focused, while integrating key technologies being developed in energy production, transmission, and consumption.



Subfields

- **Power System Policy**
Research focuses on a comprehensive analysis of the behaviors of various energy-related stakeholders, as well as current laws and systems, to support optimal decision-making based on mathematical models and engineering approaches.
- **DC Grid**
Research focuses on the development of models, system analysis, control and stability analysis, and optimal operation methods for DC grids, with the ultimate objective of realizing an optimized hybrid AC/DC grid system.
- **Grid Complexity**
With the adoption of renewable energy, the activation of distributed energy, and direct transactions between renewable energy suppliers and consumers, the grid's functions are becoming more advanced and complex. This field covers the theories and technologies for analyzing the grid through network science.
- **Power System Economics**
Through the flexible connection of grid operation and market operation, a more stable and economical long-term facility plan can be achieved.

Outlook

With the transition to eco-friendly energy sources and the increasing energy demand driven by large-scale power-consuming facilities, new energy paradigms such as the shift to DC grids, the introduction of virtual power plants, energy optimization, and the formation of complex networks are emerging. Consequently, there is a continuous demand for experts in this field. As a thorough understanding of the grid is essential for implementing full-cycle energy technologies, graduates specializing in this area will become key personnel at the core of the energy industry.

Potential Career Paths

- Government-funded research institutes
- Public corporations & Research organizations related to energy
- Energy solution & Heavy industry companies
- International energy research institutes
- Faculty in power systems, electrical energy, and smart grids
- Entrepreneurship in new energy industries



Matching with National Strategic Technology Fields

Next-generation nuclear energy / Rechargeable battery / Advanced mobility / Aerospace and marine applications / Artificial intelligence

Power Electronics and Semiconductors

Semiconductors are a key technology that has driven the digital information technology revolution of the 21st century, fundamentally transforming human life. They are also a strategic industry that accounts for the largest share of South Korea's exports. In particular, power semiconductors and power electronics technologies are essential for addressing global energy challenges and achieving low-carbon growth. By accelerating high-efficiency energy conversion and electrification, these technologies play a crucial role in realizing carbon neutrality and establishing a sustainable future energy system.

Power Electronics and Semiconductor research fields at KENTECH conduct advanced studies on materials, devices, circuits, systems, and cutting-edge analysis to implement next-generation power systems. Beyond power semiconductor technology itself, the research also focuses on power conversion systems and power control technologies, contributing to the future energy technology revolution. Through these efforts, KENTECH aims to achieve technological supremacy in power semiconductors, optimize power electronics systems, and enhance national economic growth and global competitiveness in the power and semiconductor industries.



Subfields

- Power conversion circuits and systems: Inverters, converters, AC-DC/DC-DC conversion
- Electrical machines and motor control : Optimization of high-efficiency electrical machines (motors, generators)
- EVs and renewable energy applications
- Power Semiconductor Devices: Design, simulation, and manufacturing of high-voltage, high-efficiency semiconductor devices (IGBT, MOSFET, PCSS, etc.)
- Compound Semiconductors: Next-generation semiconductors (SiC, GaN, and Ga₂O₃)
- Semiconductor Material Properties: Characterization technologies for semiconductor materials and devices and charge distribution imaging

Outlook

Semiconductors are a key strategic industry for South Korea, accounting for 19.9% of the nation's total exports. In particular, power semiconductors and power electronics technologies are recognized as essential components for achieving carbon neutrality and next-generation energy innovation. The importance of power semiconductors and power electronics is rapidly increasing across various industries, including electric vehicles (EVs), renewable energy (solar and wind power), smart grids, and data center power efficiency. Accordingly, the demand for highly skilled researchers and technical professionals in this field is also growing swiftly.

In the global semiconductor market, the market for SiC (Silicon Carbide) and GaN (Gallium Nitride)-based power semiconductors is experiencing an annual growth rate of over 30%, and it is projected that the power semiconductor market will expand to over USD 30 billion by 2030.

KENTECH offers the nation's only specialized education and research environment focused on next-generation power semiconductor devices and systems.

Potential Career Paths

- University professors in the field of power semiconductors
- Government-funded research institutes and private corporate research centers
- Leading domestic and international companies



Matching with National Strategic Technology Fields

Semiconductor and Display / Advanced Mobility / Advanced Robotics and Manufacturing

Solar Energy Applications

Solar energy is the most abundant and infinite energy source available on Earth, and theoretically, converting just 0.001% of the energy that reaches the Earth every moment could meet the global energy demand. With growing concerns about climate change and the increasing demand for renewable energy, the solar energy industry is constantly evolving, with ongoing technological innovations.

To harness solar energy, the development of photoactive materials and interface semiconductor materials, as well as the optimization of devices and the analysis of charge transport/optics, requires expertise from various fields, including materials science, chemical engineering, computational chemistry, mechanical engineering, electrical engineering, physics, and optoelectronics.

KENTECH aims to conduct innovative research in the field of solar energy applications, working with experts from various disciplines to solve global energy challenges and lead the world in this vital area of technological advancement.



Subfields

- Photoactive Materials: Organic semiconductors, inorganic-organic hybrid perovskites, and CIGS (Copper Indium Gallium Selenide), etc.
- Charge Transport Materials: Research focuses on developing suitable n-type and p-type materials to transport electrons and holes, respectively.
- Lightweight and Flexible Substrate Materials
- Device Fabrication Process: Continuous printing and vacuum thin-film processes

Outlook

Solar energy is expected to be utilized for various purposes beyond electricity generation and is gaining attention in forward-looking sectors such as those listed below. Demand in these emerging industries is anticipated to grow significantly.

- Solar Drones and Satellites
- Solar-based Hydrogen Production
- Building-integrated Photovoltaics (BIPV)
- Solar-powered Desalination
- Agrivoltaics (AgriPV)
- Mobility-integrated Solar Power

Potential Career Paths

- **Industry:** Global companies related to solar cells and optical materials/devices
- **Academia:** Faculty members from departments related to energy engineering, chemical engineering, mechanical engineering, materials science, and other related fields
- **Research Sector:** Researchers from government-funded research institutes, corporate research labs, and specialized research organizations



Matching with National Strategic Technology Fields

Advanced Mobility / Hydrogen / Next-generation communication / Advanced Robotics and Manufacturing

Battery Materials and Systems

Batteries have become an essential element across diverse industries, including electric vehicles, smart devices, and renewable energy storage, resulting in rapidly growing demand for advanced battery technologies. Recognizing this importance, South Korea has designated battery technology as one of its twelve national strategic technologies, actively supporting research and development, infrastructure establishment, and talent cultivation. Specifically, Korea's battery industry is rapidly expanding, maintaining a leading position in the global market through advanced technological capabilities. Consequently, there is a continuous increase in the demand for highly skilled professionals specialized in battery technologies.

KENTECH's Battery Materials and Systems program conducts comprehensive research across the entire spectrum of battery technology, integrating diverse academic disciplines such as electrochemistry, chemical engineering, materials science, mechanical engineering, electrical engineering, and artificial intelligence (AI). The program focuses on various aspects of battery technologies, from core materials and manufacturing processes to next-generation batteries and electric vehicle battery management systems (BMS). Furthermore, through collaborative research with domestic and international institutes and industries, combined with state-of-the-art laboratories and research infrastructure, KENTECH actively supports students in engaging in world-class research, fostering their growth into highly qualified specialists.

Subfields

- Battery Materials: cathode and anode active materials, binders, electrolytes and separators
- Next-generation Batteries: solid-state batteries, aqueous (sodium, zinc) batteries, material development, and applications
- Battery Cells and Packs: manufacturing processes, pack design, and performance optimization
- Battery Management Systems (BMS): system safety, AI-based lifespan prediction
- Battery Applications: electric vehicles, energy storage systems (ESS), and smart devices

Outlook

Battery technologies are now recognized as critical components for a sustainable future, gaining increased importance driven by rapid expansion of the electric vehicle market, growth in renewable energy storage systems, and continued demand for mobile and IoT devices. As a result, the global battery market is projected to sustain its steady growth trajectory. In particular, strengthened efforts toward carbon neutrality and eco-friendly policies is reshaping various sectors, such as energy storage systems, decentralized power grid, and electric vehicle adoption. These shifts are key drivers accelerating innovation in battery technologies and expanding investment in research and development. Korean battery companies, supported by advanced technologies and close partnerships with global automotive manufacturers, have significant growth potential. Consequently, the demand for battery research and development professionals and technical experts is expected to steadily increase.

Potential Career Paths

Graduates of the Battery Materials and Systems major can leverage strong domestic and international industries in batteries, electric vehicles, and energy storage systems (ESS) to pursue careers in various technology areas, including:

- Materials: LG Chem, POSCO Future M, EcoPro BM, L&F
- Cells and Packs: LG Energy Solution, SK On, Samsung SDI, CATL, BYD
- EV Applications: Hyundai Motors, Tesla, GM, Volkswagen
- ESS Applications: KEPCO, LG Energy Solution, Samsung SDI
- Recycling: SungEel HiTech, EcoPro CNG
- Research Institutions: Korea Institute of Energy Research (KIER), Korea Institute of Industrial Technology (KITECH), Korea Institute of Science and Technology (KIST)



Matching with National Strategic Technology Fields

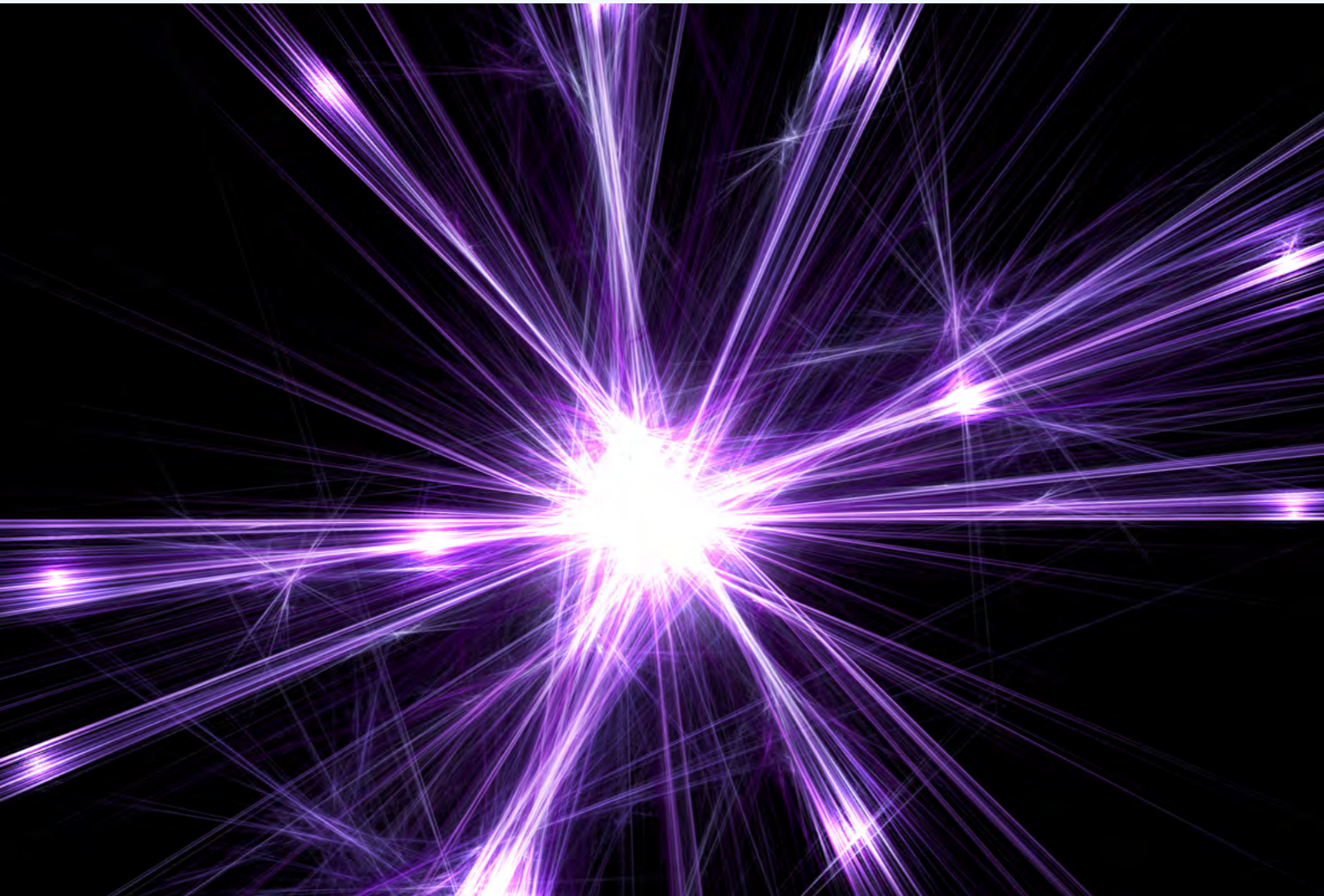
Rechargeable battery / Advanced Mobility



Nanofabrication and Characterization

Nanofabrication & Characterization is a convergent discipline that precisely manipulates atomic- and molecular-level structures, identifying unique physical and chemical properties through advanced analytical techniques. By enabling the design of high-efficiency, eco-friendly materials and devices, this field underpins breakthroughs in energy conversion/storage, semiconductors, displays, environmental/biomedical applications, and AI chips.

KENTECH's facilities boast high-resolution TEM, ultrafast spectroscopy, and large-scale simulation clusters, creating a premier environment for atomic-scale research. Our New Energy Materials Platform Center further supports scale-up processes for innovative nanomaterials, bridging the gap between fundamental research and industrial deployment. In addition, our Self-driving Laboratories combine AI, robotics, and high-throughput instrumentation, accelerating experimentation and data analysis—crucial for carbon neutrality and a sustainable energy future.



Subfields

- 1) Nanomaterials Synthesis & Processing
 - Thin-film deposition (CVD, ALD), colloidal methods for graphene, CNTs, and 2D semiconductors
 - Pilot-scale manufacturing and process optimization
- 2) Advanced Nanocharacterization
 - High-resolution TEM, STEM-EDS/EELS, X-ray (XRD, XPS) for comprehensive analysis
 - Ultrafast spectroscopy for atomic-scale dynamics
- 3) Device Fabrication & Evaluation
 - Semiconductor, MEMS/NEMS processes, electrochemical/optical performance tests
 - Low-power AI chips, neuromorphic, and next-generation nanodevices
- 4) AI & Robotics-Driven Labs
 - ML/DL-based materials design, automated robotic workflows
 - Large-scale data and simulation for autonomous R&D

Outlook

Nanotechnology is a cornerstone of future industries, pivotal in semiconductors, battery technology, hydrogen, biomedicine, and AI chip development. As high-resolution TEM analyses and pilot-scale fabrication mature, novel materials and devices can be realized at unprecedented speed. Recognizing this, major economies worldwide are boosting investment in nanotech to meet carbon neutrality goals and maintain industrial competitiveness.

KENTECH's New Energy Materials Platform Center stands at the forefront of bridging lab discoveries and market-ready products. Coupled with the rise of Self-driving Labs, the field of Nanofabrication & Characterization will continue to see high demand for experts capable of merging advanced instrumentation, automation, and AI-driven approaches—leading to significant strides in the global energy and electronics sectors.

Potential Career Paths

- Industry
 - Semiconductor & AI chip (Samsung, Intel, Apple, NVIDIA), battery/chemical (LG Chem, POSCO, etc.), instrumentation, startups
- Academia
 - Faculty positions in energy/materials/AI fields, leading large-scale projects
- Research Institutes
 - National labs (KIST, KIMS), global institutions (Argonne, CEA-Leti), corporate R&D centers
- Public & Policy Sector
 - Government agencies, international organizations (OECD, IEA)



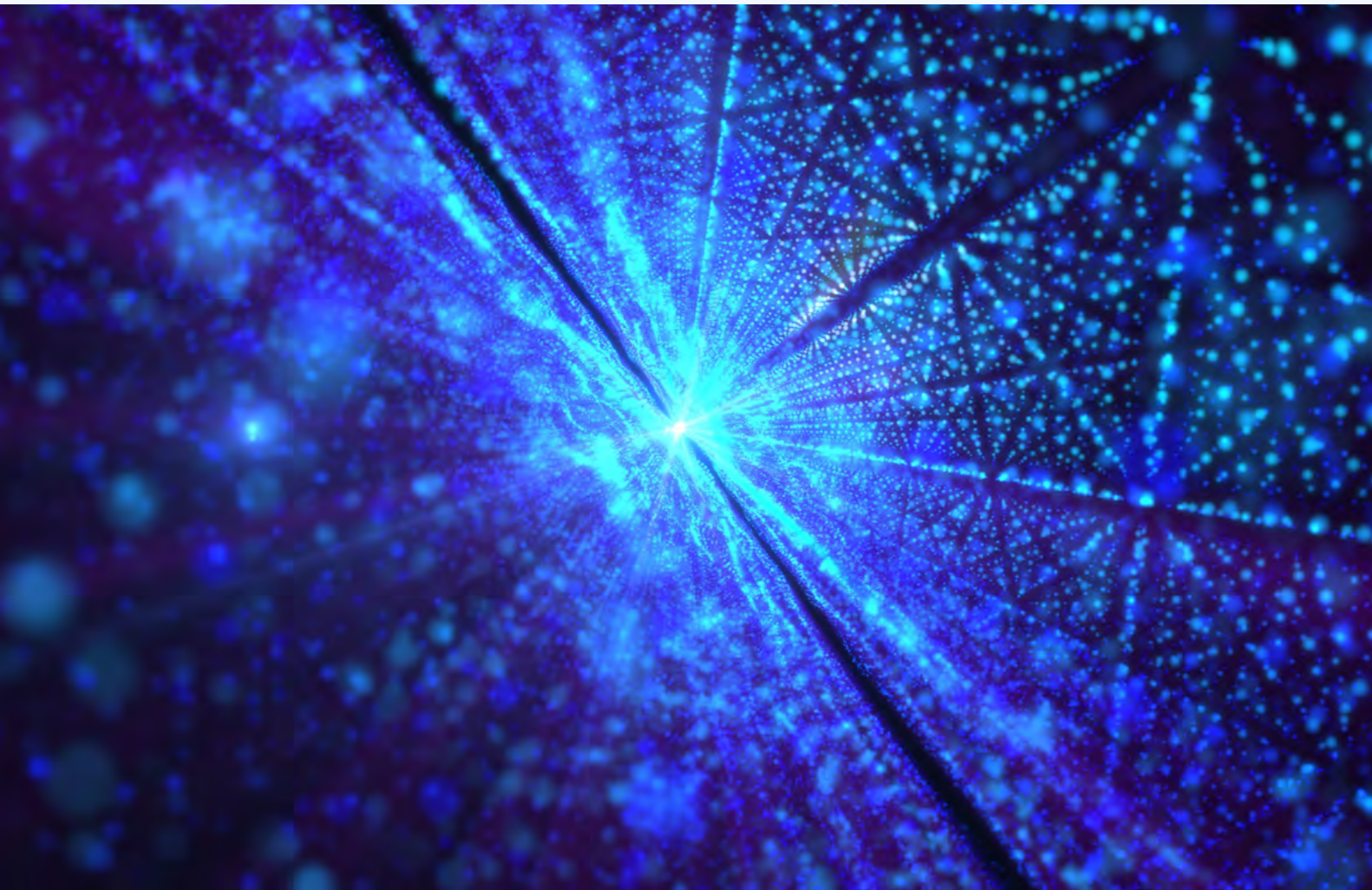
Matching with National Strategic Technology Fields

Semiconductor & Display / Rechargeable Battery / Advanced Robotics & Manufacturing / Artificial Intelligence (AI) / Carbon Neutral Technologies

Materials for Hydrogen Energy

The current carbon-based energy economy, which relies on petroleum and coal, faces challenges such as greenhouse gas emissions and resource depletion. Therefore, a new energy economy system is necessary, and the transition to a hydrogen economy is gaining significant attention as an urgent global priority. The hydrogen economy is supported by various hydrogen energy technologies. Green hydrogen is produced from compounds such as water, while blue hydrogen is generated by incorporating carbon dioxide capture, storage, transportation, and utilization with traditional gray hydrogen production methods. For transportation, hydrogen is stored and delivered using high-pressure gas systems, as well as in liquefied or compound forms for supply to end consumers. Additionally, hydrogen is utilized by converting it into final energy forms, such as electricity and heat, for use in hydrogen-powered vehicles and power plants.

The field of hydrogen energy materials focuses on developing technologies essential for establishing and utilizing the entire production, supply, and utilization infrastructure. In particular, efforts are concentrated on developing technologies for the production, supply, and transportation of green hydrogen, which emits zero greenhouse gases, contributing to the transition toward a new hydrogen energy economy system.



Subfields

- **Hydrogen Production**
 - Development of materials, components, stacks, and system technologies for water electrolysis (alkaline, polymer electrolyte, solid oxide, etc.).
 - Transition metals and compounds (Ni, Cu, TiO₂, RuO₂ etc.), Carbonous Materials (Graphene, CNT, etc.), 2-dimensional compounds (MXene, MoS₂, etc.)
- **Hydrogen Storage and Transportation**
 - Development of materials, processes, and system technologies for hydrogen storage, including hydrogen liquefaction, liquid compounds (e.g., ammonia), and metal hydrides.
- **Hydrogen Utilization**
 - Development of materials, components, processes, and system technologies for fuel cells (polymer electrolyte, solid oxide, etc.).
 - Hydrogen turbine materials, components, processes, and system technologies.

Outlook

Carbon neutrality and decarbonization have become global trends and are expected to remain key international priorities for the coming decades. In response, major countries such as South Korea, the United States, Germany, Japan, and China have declared their national decarbonization plans, including carbon neutrality pledges, and are actively working to implement them. Alongside technologically advanced nations like the U.S., Japan, and Germany, the Korean government has also set a goal to become a leading hydrogen economy by 2040, increasing investments in the development of hydrogen technologies across the entire value chain and fostering the related industries. Graduates specializing in hydrogen energy materials will have the opportunity to play a leading role in driving the transition to a new energy economy system.

Potential Career Paths

- **Industry**
 - Entrepreneurship based on related to full-cycle hydrogen technologies.
 - Research and development roles in large corporations, mid-sized enterprises, and small businesses in energy, chemicals, steel, materials, components, and systems sectors.
- **Academia**
 - Faculty positions in related disciplines such as energy engineering, chemical engineering, mechanical engineering, and materials engineering.
- **Research Institutes**
 - Researcher positions at government-funded research institutes and corporate R&D centers.



Matching with National Strategic Technology Fields

Hydrogen / Aerospace and marine applications / Next-generation nuclear energy

Processes for Hydrogen Energy

General process engineering is an academic discipline that understands and applies the fundamental principles and laws of nature that enable humans to convert raw materials and energy into useful products for society at an industrial level. Hydrogen energy process engineering is an academic discipline that understands and applies the fundamental principles and laws of thermodynamics to build hydrogen infrastructure essential to society and mass-produce hydrogen-related products through it in order to build a hydrogen economy and ecosystem.

By utilizing the driving forces of nature such as pressure, temperature, and concentration gradients and the law of conservation of mass, hydrogen energy process engineering can develop methods to mass-produce, synthesize, and purify desired hydrogen products. Hydrogen energy process engineering focuses on the design, operation, control, optimization, and enhancement of physical, chemical, and biological processes.

It is also an academic discipline that can be applied to a wide range of industries such as the oil & gas industry, agriculture, automobiles, biotechnology, chemicals, food, materials development, mining, nuclear power, petroleum industry, pharmaceuticals, and software development, as well as the hydrogen energy industry.



Subfields

- **Clean Hydrogen Production Process**
Water electrolysis process (Green hydrogen production), blue hydrogen production technology (Reforming and carbon capture process), hydrogen purification technology, natural hydrogen extraction
- **Hydrogen Storage and Transportation Process**
Hydrogen liquefaction, methanol synthesis, ammonia synthesis, liquid organic hydrogen carrier (LOHC) hydrogenation/dehydrogenation
- **Hydrogen Utilization Process**
Hydrogen fuel cell power generation, hydrogen turbine power generation, liquid hydrogen refueling station, liquid hydrogen and ammonia import terminal, hydrogen utilization technology for industrial applications such as iron-making
- **Hydrogen Safety Technology**
Risk assessment technology, dispersion model development, safety regulation development

Outlook

Carbon neutrality and decarbonization are global trends and are expected to remain key international priorities for the coming decades. In response, major countries such as South Korea, the United States, Germany, Japan, and China have declared and are actively promoting their national decarbonization plans, including carbon neutrality commitments. Alongside technologically advanced nations like the U.S., Japan, and Germany, the Korean government has also set a goal to become a leading hydrogen economy by 2040, increasing investments in the development of hydrogen technologies across the entire value chain and fostering the related industries.

Graduates specializing in hydrogen energy processes will have the opportunity to play a pivotal role in leading the transition to a new energy economy system.

Potential Career Paths

- **Industry**
 - Entrepreneurship based on related to full-cycle hydrogen technologies.
 - Research and development roles in large corporations, mid-sized enterprises, and small businesses in energy, chemicals, steel, materials, components, and systems sectors.
- **Academia**
 - Faculty positions in related disciplines such as energy engineering, chemical engineering, mechanical engineering, and materials engineering.
- **Research Institutes**
 - Researcher positions at government-funded research institutes and corporate R&D centers.



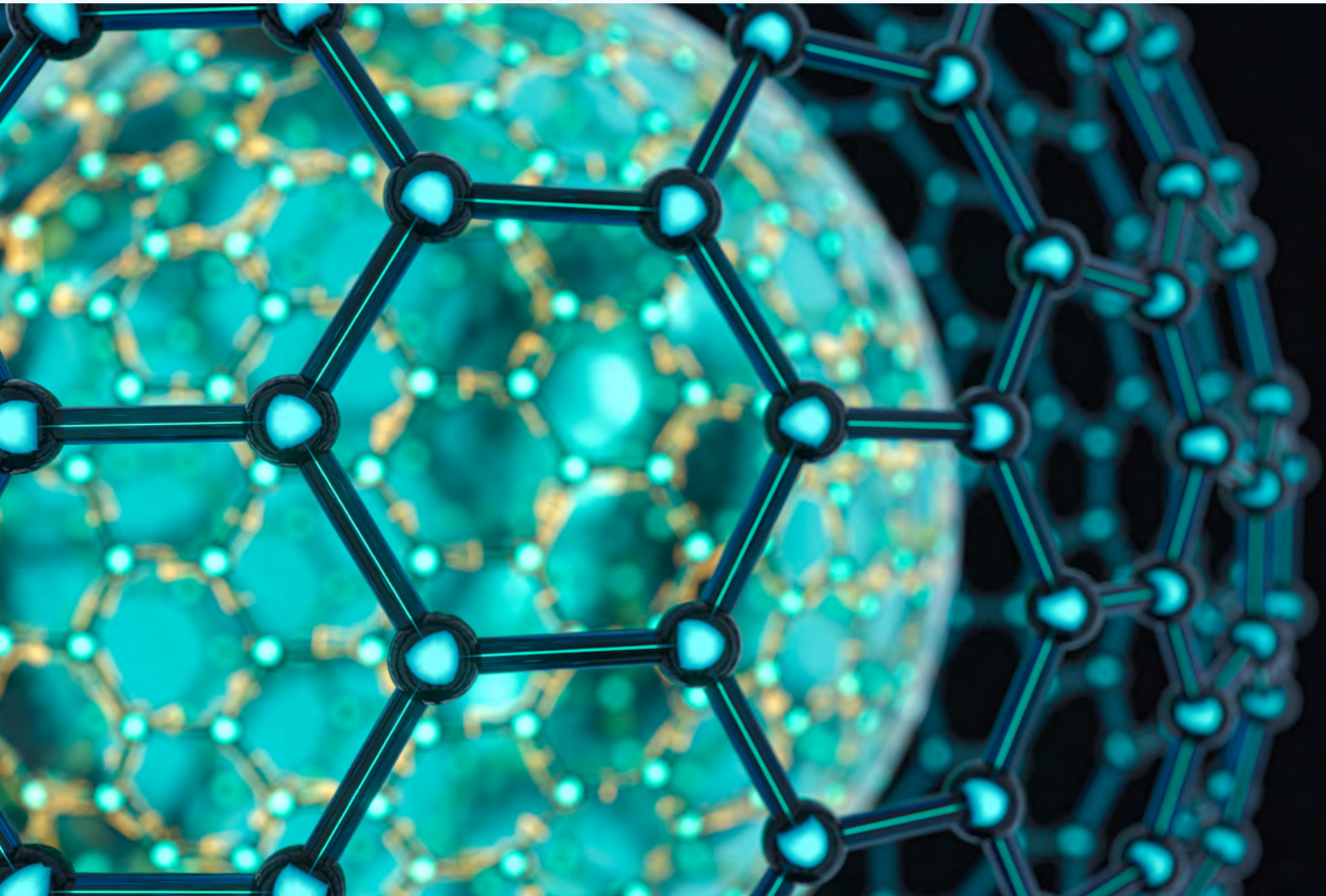
Matching with National Strategic Technology Fields

Hydrogen / Aerospace and marine applications / Next-generation nuclear energy

Carbon Upcycling Technologies

Carbon upcycling technology is one of the carbon neutrality technology as an advanced interdisciplinary technology that integrates chemistry, physics, biology, chemical engineering, biotechnology and environmental engineering techniques to upcycle industrial by-products and waste, such as CO₂, waste plastics, biomass, and spent batteries, into high-value materials. This technology can be merged with AI/Machine learning to be applied in the continuous flow and mass production system for industry.

These include renewable energy sources of gas fuels (hydrogen, methane, etc.), green chemicals (methanol, biodegradable materials), and transportation fuels (green petroleum, green methanol, e-fuels, e-SAF, etc.), ultimately contributing to a carbon-neutral circular economy. This technology can contribute for the companies to reduce and overcome carbon tax, carbon emission trading system and carbon boarder adjuster which were suggest by EU and applied from 2030 partially and completely acted in 2050. To solve those problems, we have to develop the advanced carbon neutrality technology based on the fusion technology.



Subfields

At KENTECH, research on various carbon upcycling technologies is conducted based on chemistry, physics, biology, chemical engineering, biotechnology, and environmental engineering processes. This includes upcycling waste plastics and carbon dioxide into high value chemicals and transportation fuels of e-fuel such as ethanol and methanol, and e-SAF. Carbon neutrality technology also converts biomass through bioprocessing into hydrogen, methane, biodegradable materials, and nanocellulose, and producing green hydrogen through electrochemical processes. Additionally, research focuses on converting carbon dioxide into various high-value materials through CCU (Carbon Capture & Utilization) technologies.

Outlook

Both domestically and internationally, including the EU and G7, carbon upcycling technology has been designated as a key future technology, prompting bold national-level investments to achieve a carbon-neutral circular economy. In addition, to meet the 2030 NDC targets, large corporations, mid-sized enterprises, and small businesses alike are embracing ESG principles like carbon tax, carbon emission trading system and carbon boarder adjuster and implementing various transformative strategies for carbon reduction. Amid these dynamic changes toward a carbon-neutral circular economy, carbon upcycling technology will play a pivotal role for the companies.

Potential Career Paths

- Researchers in the national research institutes and professors in the universities in fields related to chemistry, physics, biology, chemical engineering, environmental engineering, biotechnology, and energy engineering
- Researchers in the companies involved in renewable energy, fuels, resources, and chemicals
- Government agencies related to renewable energy, resources, and carbon reduction, such as NDC, the Ministry of Industry, and the Ministry of Environment
- Investment institutions and companies related to energy, carbon reduction, and climate technology, including VCs and accelerators
- Entrepreneurs in climate technology, renewable energy, and upcycling industries



Matching with National Strategic Technology Fields

Carbon Neutrality / Hydrogen / Advanced Biotechnology / Secondary Batteries / Advanced Mobility / Semiconductors / Aerospace & Marine

〈Research Statement〉

Electrochemical, photocatalytic, photoelectrochemical and thermocatalytic CO₂ conversion into high value chemicals and fuels; waste plastics degradation; low temperature degradation into gasoline and diesel, microwave absorption degradation into H₂/CNT, supercritical fluid degradation into gasoline, diesel H₂/CNT/e-SAF. Biodegradation of biomass into gas fuels and chemicals.

Chemical Engineering for Energy

Chemical Engineering for Energy is an academic field that leads the transition from traditional petrochemical-based industries to next-generation carbon-neutral chemical processes and advanced energy materials industries. It aims to move beyond conventional fossil fuel-based chemical and fuel production, toward sustainable chemical processes utilizing carbon dioxide, hydrogen, and electricity. Through this transformation, the field seeks to establish future-oriented energy and chemical industrial models and realize eco-friendly industrial systems free from carbon emissions.

In particular, by integrating cutting-edge technologies such as artificial intelligence (AI), nanotechnology, catalysis, and electrochemistry, the field focuses on developing high-efficiency, low-carbon chemical processes and overcoming the limitations of traditional chemical industries. The construction of these "carbon-free chemical processes" will serve as a fundamental basis for future energy-chemical convergence industries, playing a crucial role in accelerating the transition to a carbon-neutral and hydrogen-based economy.



Subfields

- (1) Carbon Upcycling & CO₂ Utilization
- (2) Green Hydrogen Production & Storage
- (3) Next-Generation Energy Storage
- (4) Electrochemical Chemical Processes
- (5) Catalysis & Energy Conversion

Outlook

As core technologies for carbon neutrality, hydrogen economy, and climate crisis mitigation, chemical engineering for energy is a rapidly growing field that attracts massive global R&D investments and policy support. Key areas such as carbon capture/utilization (CCUS), hydrogen production/storage, advanced batteries, and next-generation catalysts form the foundation of energy transition, decarbonization, and renewable energy-integrated industries. There is a growing global demand for highly skilled interdisciplinary talents at the interface of energy, chemistry, and materials, and this field is expected to play a leading role in creating new eco-friendly industries and technologies for a sustainable future.

Potential Career Paths

- **Industry**
 - Domestic and global leading Companies, Next-Generation Energy Startups/Ventures
- **Academia**
 - Faculty members in the field of Energy Engineering, Chemical Engineering, Materials Science, Environmental Engineering at domestic and international universities
- **Research Institutes**
 - Domestic government-funded research institutes and international research institutions (e.g., in the U.S., Europe, etc.)



Matching with National Strategic Technology Fields

Rechargeable / Advanced biotechnology / Hydrogen

Nuclear Energy Systems

In the process of nuclear fission and fusion, energy is released according to the mass-energy equivalence principle ($E=mc^2$), proportional to the mass defect. This nuclear energy can provide an infinitely large amount of energy and is being highlighted as the next-generation energy solution for humanity, capable of addressing issues like fossil fuel depletion and environmental pollution. As large-scale, government-led research projects progress and private-sector investment and innovation increase, the demand for professional human resources in nuclear energy continues to grow.

KENTECH is at the forefront of accelerating the realization of fusion energy. SUCCEX, a world-class national large-scale research facility with a 16 Tesla superconducting conductor, is being constructed at the campus, and innovative research on core technologies like neutral particle beam injection is conducted. Furthermore, KENTECH operates specialized programs on Small Modular Reactors (SMRs), focusing on expanding the application of safe SMRs through integrated research and education on next-generation reactor systems, digital twins, and nuclear energy convergence technologies.

KENTECH's education and research in the field of nuclear energy are expected to play a significant role in achieving a clean energy society through the supplying nuclear fission and fusion energy.



Subfields

- Fusion Reactor Design Technology: a future fusion reactor (K-Demo), Blanket technology
- Superconductors and Superconducting Magnets: 16 Tesla superconducting magnet design technology for the construction of SUCCEX
- Fusion Plasma Heating and Current Drive (H&CD) Technology
- Industrial Plasma Technology
- Small modular reactors (SMR) and microreactors
- Hybrid energy system with Advanced reactors

Outlook

In order to realize nuclear fusion energy, large-scale research and investment are being conducted mainly in the United States, Europe, China, and Japan with the goal of demonstrating nuclear fusion energy after 2030. Next-generation nuclear reactors, including SMRs, are expected to be a key technology for achieving carbon neutrality, and a global market worth 600 trillion KRW is expected to open in the energy, mobility, data centers, and space technology fields in the 2030s. Accordingly, the demand for experts in the nuclear energy field is rapidly increasing, and the nuclear power/nuclear fusion field, which is a comprehensive scientific discipline encompassing machinery, electricity, materials, and data science, requires talents with integrated thinking and research capabilities. To this end, KENTECH aims to foster integrated talents leading the nuclear energy field through future-oriented research and practical applications.

Potential Career Paths

- Faculty member at domestic and international universities
- Government-funded research institutes: Korea Institute of Fusion Energy (KFE), Korea Atomic Energy Research Institute (KAERI), Korea Institute of Nuclear Safety (KINS), etc.
- Public research institutes abroad
- Public enterprises and major domestic and international corporations



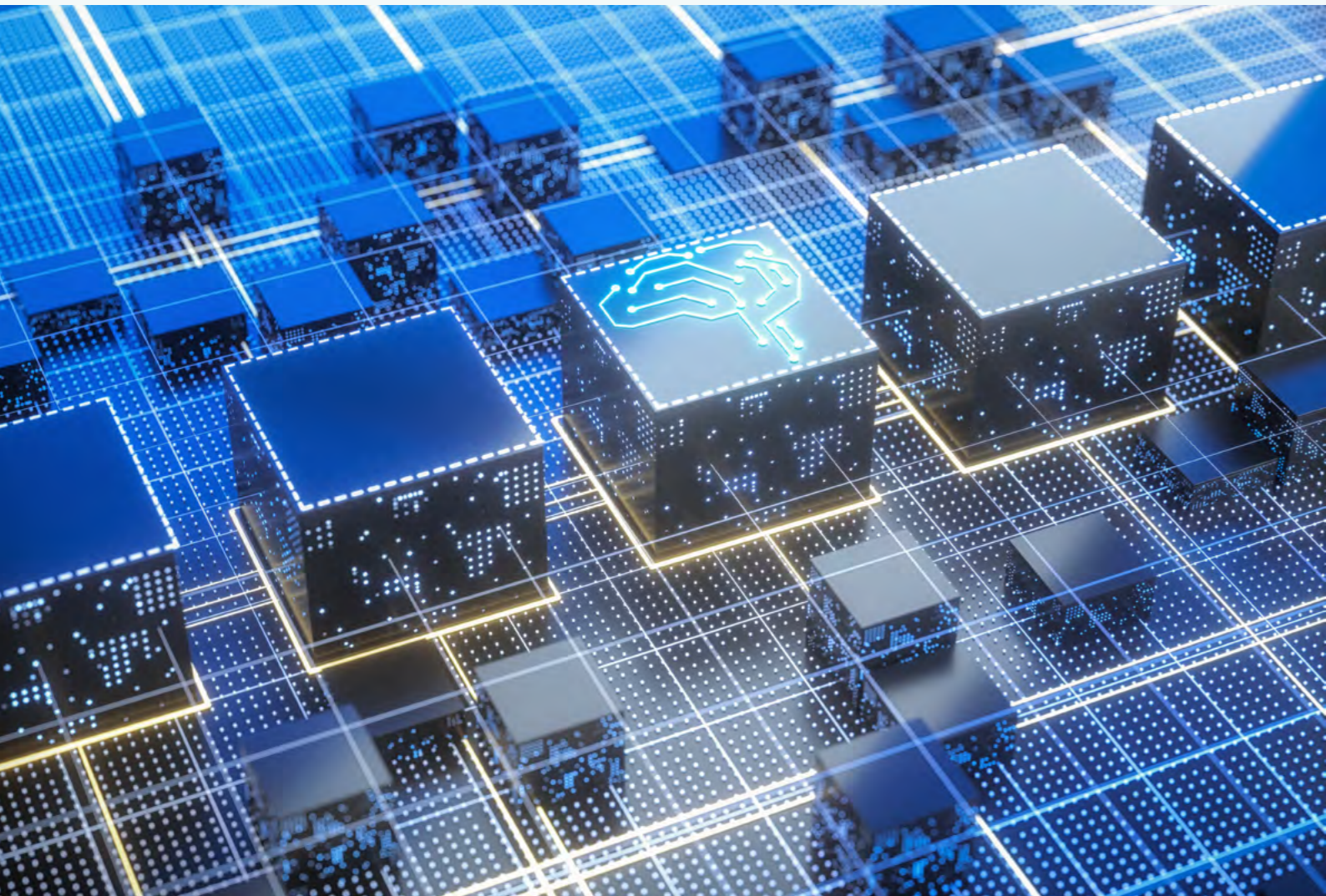
Matching with National Strategic Technology Fields

Next-generation nuclear energy

Intelligent Electrical Safety Concentration

Technologies that are not guaranteed to be safe will not be accepted by society. In a time of energy transition in preparation for a carbon-neutral society, changes will occur along with the development of various new technologies. With the technologies for new energy facilities becoming highly complex, it is becoming increasingly important to ensure their safety.

To better accommodate the changes in electrical safety technology, there is a need for electrical safety experts with extensive knowledge and experience in various related areas, rather than just specific individual technologies. This Intelligent Electrical Safety concentration aims to equip students with expertise in state-of-the-art energy technology, as well as the ability to combine what they know and apply it in the field. Students will thus be provided with opportunities to work together with energy companies in order to gain an understanding of the practical work involved in this area, based on a solid foundation of theoretical knowledge, and become competent professionals.



Subfields

In order to ensure the safety of related facilities such as battery systems and electric vehicles in the carbon-neutral era, a comprehensive understanding of the electrical characteristics represented by the power system, data-driven artificial intelligence technology, and materials for new equipment is required. The Intelligent Electrical Safety concentration encompasses the following areas to educate students on these convergent technologies.

• Grid

Students will gain an understanding of electrical systems that are fundamental to electrical safety, such as power semiconductors, power electronics, and power systems. This subfield also covers technologies that combine the technologies for electrical systems with AI and material technologies.

• AI

This program consists of basic and advanced studies in the intelligent technologies to be integrated into electrical safety. This subfield covers not only basic AI technologies including machine learning, but also integrated technologies such as diagnostic technology using intelligent electrical devices.

• Material

Various new materials are applied to modern grids, such as photovoltaics, batteries, fuel cells, and water electrolysis technology. To ensure the safety of the integrated system, safety control and diagnostic technology at the material level is crucial. This subfield deals with equipment safety technologies involving the use of new materials.

• Safety

This program provides comprehensive education on electrical safety in grids, AI, and material technologies. It also provides education in disciplines related to basic safety in order to study electrical safety. This subfield also covers advanced technologies related to electrical safety in combination with intelligent technologies.

Outlook

In order to achieve net-zero carbon emissions, industries related to energy safety will need to undergo dramatic growth, and this will raise the demand for professionals with multidisciplinary knowledge and skills to operate energy facilities safely. This has been highlighted in recent years due to the rapid increase in the number of equipment installations incorporated with new technologies within power grids. Students in the Intelligent Electrical Safety concentration program will be provided with opportunities to systematically learn and gain wide-ranging experience in related technologies. They will be nurtured into energy safety experts who will be in high demand in the carbon-neutral era.

Potential Career Paths

After obtaining a degree and certifications, graduates will be able to find employment at a research institute or company specializing in electrical safety, start a business in a related area, etc.

- Government-funded research institutes
- Companies specializing in electrical energy and safety
- Public companies or public research institutes specializing in electrical safety
- Establishment of startups related to intelligent electrical safety

Fuel Cell Concentration

Fuel cell technology is key to ushering in the hydrogen economy era and creating an energy cycle without concerns about depletion. It will allow society to achieve net-zero carbon emissions based on hydrogen fuel and create the most efficient system based on hydrogen. However, real-life fuel cell technology is still fraught with a number of technical limitations.

One example is that flexible power generation according to energy load is impossible. The Fuel Cell Concentration was established to address the limitations of fuel cell technology and to develop technologies that meet actual needs, thereby working at the forefront of the energy market. Furthermore, it is aimed at producing advanced-level researchers who can present a new paradigm for power generation technology.

Subfields

The Fuel Cell concentration program, focusing on fuel cell and power system technologies, aims to produce advanced-level talents who can serve as global leaders with creativity and practical skills.

- All areas of fuel cell technology and fuel cell lifecycle technology
- New material-based technology for the utilization of catalysts
- Smart grid-based power system connection technology
- System manufacturing technology encompassing all of the above
- All other technologies that can contribute to the advancement of fuel cell-based power generation technology

Outlook

The demand for making fuel cell operation in the power system more flexible is on the rise amid the global trend toward carbon neutrality. The Fuel Cell concentration program aims at overcoming the limitations of fuel cell technology and provides students with the opportunity to grow into leaders in the next-generation energy market by acquiring basic knowledge of power systems as well as fuel cell technology. Those graduating from this program are expected to be presented with various job opportunities, from working for a company to conducting research in the lab, or establishing their own company and becoming energy experts recognized on the international stage beyond Korea.

Potential Career Paths

Students who complete this program can pursue the following career paths:

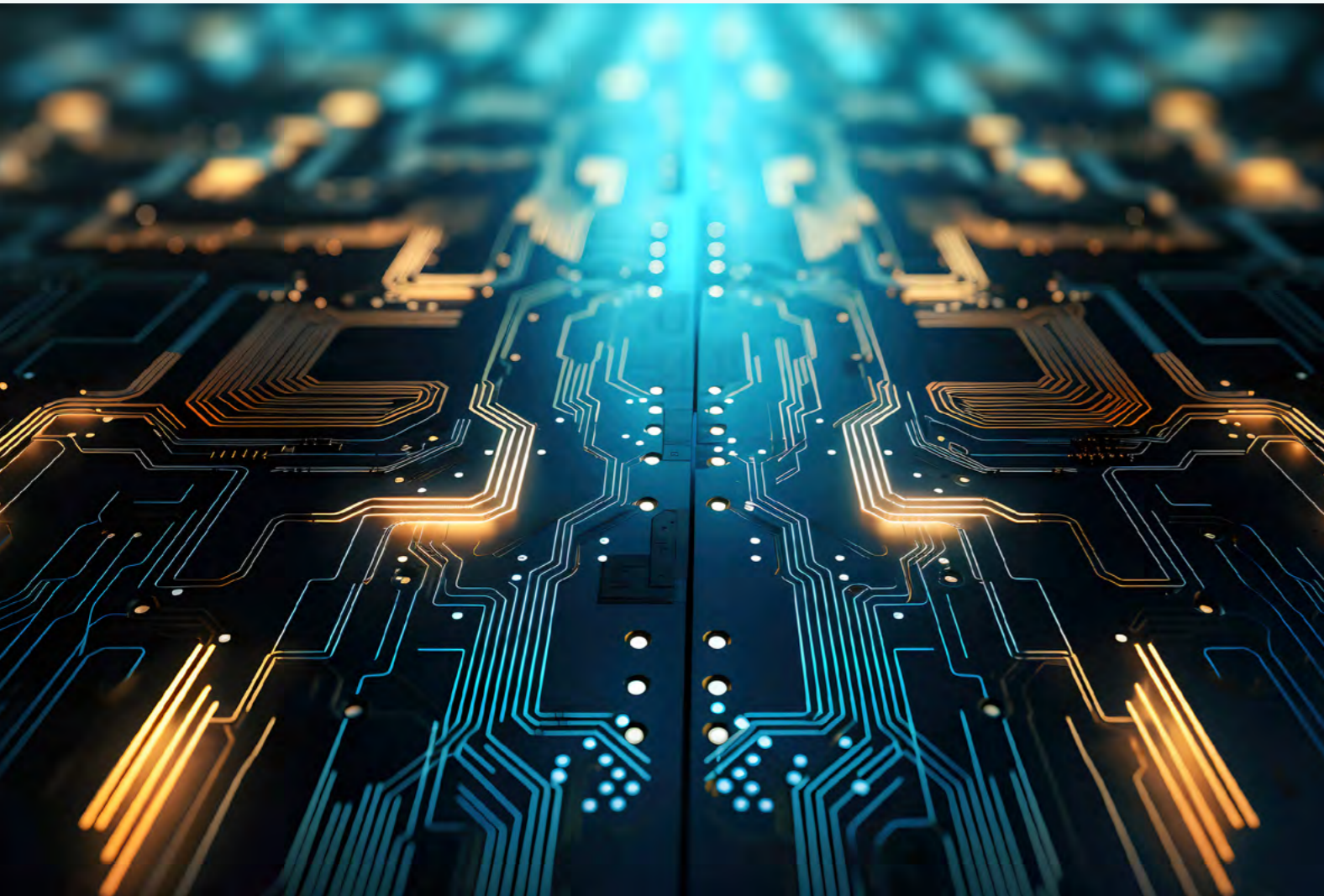
- Employment as a regular employee at a domestic company or research institute related to fuel cell-based power generation technology
- Starting a business venture that can be a global pioneer with new technologies
- Employment at an overseas company or research institute that engages in cutting-edge research with advanced technologies
- Research engineers who spearhead the development of power generation technology in Korea
- Employment at a policy-making organization that puts forth advanced policies in related fields
- Various other careers that can contribute to fuel cell-based power generation technology



Power Semiconductor Concentration

Semiconductor technology has arguably led to the most dramatic changes in people's lives by bringing about the digital information revolution in the 21st century, and it is a key industry that accounts for the largest portion of Korea's exports. Not only that, semiconductors can help enhance energy efficiency and electrification, which are essential to solving the energy problems faced by humanity today, and to drive low-carbon growth. Students in the Power Semiconductor concentration program at KENTECH conduct research on materials, devices, circuits, and systems, as well as engaging in advanced analysis to realize semiconductors for power systems that can contribute to an energy technology revolution in the future.

The aim is to contribute to national economic development by developing semiconductor technologies with a competitive edge to create a super-gap with other nations.



Subfields

The Semiconductor technology revolution, encompassing transformation of advanced power systems and electric vehicles and mobility, requires the convergence of basic disciplines such as electrical and electronic engineering, new materials engineering, physics, physical chemistry, and chemistry. Therefore, the Power Semiconductor concentration program at KENTECH is aimed at innovating compound semiconductor-based devices and circuit technology to reach beyond the limits of silicon semiconductors by integrating the expertise of professors of electrical and computer engineering, new materials engineering, chemistry, and chemical engineering.

- **Semiconductor Devices**

High-voltage, high-efficiency semiconductor device design, simulation, and manufacturing processes, IGBT, MOSFET, PCSS

- **Electric Power & Electronics**

Power conversion circuits and systems for power systems and vehicles and electrical device control

- **Compound Semiconductors**

Semiconductor devices based on compound semiconductors made of SiC, GaN, Ga2O3, etc. which go beyond the limitations of silicon semiconductors

- **Semiconductor Properties**

Physical analysis techniques to analyze semiconductor properties and devices and imaging techniques to visualize atomic structure, chemical composition, and charges

Outlook

Because the semiconductor industry is a key industrial sector in Korea that accounts for 19.9% of total exports and requires the highest level of brainpower, the challenge of securing highly educated professionals has become a national task. Students who have cultivated their semiconductor-related knowledge and skills through this interdisciplinary concentration program are expected to serve as core talents for national development. Moreover, while there are domestic universities that have recently launched semiconductor-related programs, none of them focus on education and research in the field of power semiconductor devices, so the graduates of KENTECH's Power Semiconductor concentration will be able to set themselves apart through differentiated competencies and expertise.

Potential Career Paths

Graduates of this program can pursue a variety of career paths, as industry as well as academia and government-funded research institutes are all in great need of doctoral-level experts to develop technologies that can help achieve a technology gap. Graduates led by professors participating in this program have entered various fields related to semiconductors, and since semiconductors are expected to have more diverse applications in the future, the career paths and prospects are very bright for graduates.

- **Higher education institutions**

- **Government-funded research institutes**

Korea Institute of Science and Technology, Electronics and Telecommunications Research Institute, Korea Photonics Technology Institute, Korea Electrotechnology Research Institute, Korea Advanced Nano Fab Center, Korea Institute of Materials Science, Korea Research Institute of Standards and Science, Agency for Defense Development, etc.

- **Companies**

Samsung Electronics, KEPCO, KEPCO KPX, SK Hynix, LG Electronics, LG Display, Samsung Display, Hyundai Motor, Hyundai Mobis, On-Semiconductor, Infineon Technology, ASML, Applied Materials, etc.

Next Generation SMR(Small Modular Reactor) Concentration

Nuclear power generation will not be accepted by society unless its safety can be guaranteed. It is thus essential to develop a reactor that can inherently guarantee safety. A small modular reactor (SMR) is a reactor whose capacity is smaller (less than 300 MW) than conventional reactors.

Its safety is ensured by natural cooling in the event of an accident, and its capacity is determined by the number of modules, without being designed anew. The Next Generation SMR concentration aims to cultivate talents who will lead the way in the new era of nuclear power generation.



Subfields

The development of next-generation SMRs, which are attracting attention as the future of nuclear power plants, requires a comprehensive understanding of reactor physics, thermohydraulic and safety systems, and reactor materials. The Next-Generation SMR concentration program encompasses the following areas to educate students in related technologies.

- **Reactor Physics**

This is the study of the behavior of neutrons in nuclear reactors where techniques for controlling and analyzing fission reactions are used to design reactor cores.

- **Next-Generation SMR Thermo-Hydro System Research**

This is a field of research concerning thermal energy control and power conversion systems in relation to SMRs. It includes research on cooling materials for transferring the thermal energy generated in reactors, research on heat exchangers and safety systems using cooling materials, development of energy mix strategies with other energy sources, and research on power generation systems.

- **Next-Generation SMR Safety Analysis**

The objective is to develop computational analysis codes and systems to analyze SMR system behavior under various operating and accident conditions, and research is conducted on reactor safety and multiphysics code analysis related to SMRs.

- **Reactor Materials**

Studies are carried out to examine the physical properties of structural materials and nuclear fuel cladding required for SMR development, and they also include the development and testing of new materials.

Outlook

It is difficult to achieve net-zero carbon emissions without utilizing nuclear energy. SMR, a viable model for next-generation nuclear power plants worldwide, is a field in which research and development is currently being carried out in full swing. It is believed that Korea will be able to secure the world's best SMR technology based on its current technology status, and there will be skyrocketing demand for professionals with knowledge and skills related to various aspects of SMR. The Next Generation SMR concentration program will foster nuclear energy experts for the carbon-neutral era to meet the needs of future society.

Potential Career Paths

After obtaining a degree and certifications, graduates will be able to find employment at a research institute or company specializing in nuclear energy and be presented with various career options.

- Government-funded research institutes
- Overseas national or public research institutes
- Public corporations or public research institutes in the field of nuclear energy and safety
- Global energy companies
 - NuScale, Terrapower, KAIROS power, etc. in the United States
 - Samsung Heavy Industries, Hyundai Heavy Industries, Hyundai Engineering, Doosan Enerbility, Doosan Heavy Industries, etc.

Energy Policy Concentration

KENTECH is the world's first research-oriented university specialized in energy, dedicated to cultivating talent that will lead the future energy industry through innovative interdisciplinary education. Under this educational philosophy, the newly established Energy Policy Concentration offers a unique curriculum bridging engineering and public policy, with a core focus on quantitative methods and simulation-based policy analysis.

This program is designed for students who seek to address complex policy decision-making issues in the energy sector through a mathematical and analytical lens, grounded in a deep understanding of technology. Students will comprehensively integrate knowledge in science, technology, economics, and social analysis to study and solve the multifaceted challenges of today's energy landscape.

In addition, students from diverse academic backgrounds—including engineering, natural sciences, and social sciences—will collaborate on problem-solving projects, gaining hands-on experience in a project-based curriculum that spans energy technology and public policy. The ultimate goal of the program is to nurture interdisciplinary leaders who can simultaneously drive energy technology innovation and effective policy design.



Subfields

This program covers a wide range of interdisciplinary areas. The major areas of study are as follows:

- **Energy Technology Innovation and Systems Policy:**
This field analyzes the interaction between the development and adoption of new technologies—such as renewable energy, energy storage, and smart grids—and related policy decisions. It also explores future strategies for energy systems at various levels, including policies that promote technology development and infrastructure investment, and the use of artificial intelligence and digital technologies for system innovation.
- **Energy Economics and Market Policy:**
This area focuses on quantitative analysis of energy markets—including electricity and gas—through both domestic and international perspectives. Topics include investment strategies, pricing policies, energy trading systems, and incentive design within the energy industry. Students gain hands-on experience in data- and model-based policy design, impact assessment, and simulation using engineering models and AI-based methodologies.
- **National Climate-Energy Policy and Governance:**
This field addresses macro-level policies for carbon neutrality and climate crisis response. Topics include greenhouse gas reduction targets, carbon pricing scheme design, regulatory and sustainability policies, and public budgeting for climate action. It also examines the institutional aspects of policy effectiveness and efficiency, including policy governance, regulatory governance, and the allocation of national fiscal resources.
- **Energy Security and Risk Management:**
This area emphasizes national energy security, safety, and risk governance. It includes strategic planning for energy security, electric grid stability and cybersecurity, and nuclear safety policies. Students also explore the social dimensions of energy policy, such as public acceptance, risk communication, and stakeholder engagement. Additionally, the curriculum covers international cooperation strategies for enhancing global and regional energy security.

Outlook

With the global shift toward decarbonization and decentralization, the expansion of renewable energy and the digital transformation of the energy sector are accelerating, bringing rapid changes to the industrial paradigm. In Korea as well, large-scale investments are being made in energy technology innovation under policy frameworks such as Green New Deal and Carbon Neutrality. However, the supply of skilled professionals capable of leading this transformation has not kept pace with the growing demand. Traditional single-discipline education is no longer sufficient to address these complex and multifaceted challenges. There is an urgent need for interdisciplinary talent who can transcend conventional academic boundaries and develop integrated solutions. The energy sector requires not only engineering innovation but also rigorous policy analysis and strategic decision-making, resulting in a growing societal demand for professionals equipped with expertise across both technology and policy domains.

This program responds to this critical need by aiming to nurture experts who can lead the energy transition and contribute to energy policy development at both national and global levels. Through a unique integration of advanced energy engineering research and policy studies, students will be equipped with both deep academic insight and practical policy acumen.

Potential Career Paths

Graduates of this program will be well-prepared to pursue careers across a wide range of sectors both domestically and internationally, including government, industry, and academia.

Specific career paths may include:

- **Government and Public Institutions:**
Graduates may work as policy officers in government ministries such as the Ministry of Trade, Industry and Energy (MOTIE) or the Ministry of Environment. They may also take on roles in public energy institutions such as the Korea Energy Agency, Korea Electric Power Corporation, or Korea Power Exchange, engaging in policy planning and strategic development.
- **Research and Academia:**
Opportunities are available as policy researchers in national research institutes such as the Korea Energy Economics Institute (KEEI) and the Korea Institute of Energy Technology Evaluation and Planning (KETEP), or in private-sector think tanks. Graduates may also continue their studies in doctoral programs, eventually contributing to academia as university professors or senior researchers.
- **Industry, Finance, and Consulting:**
Graduates can work in energy-related industries such as power generation companies, renewable energy firms, and energy ICT/solution providers, taking on roles in policy strategy, sustainability management, and new business development. They may also serve as experts in energy-focused investment firms, financial institutions, consulting companies, and accounting firms—acting as key connectors between the private sector, finance, and government.
- **International Organizations and the Nonprofit Sector:**
Graduates may work as professionals at global institutions such as the International Energy Agency (IEA), the Green Climate Fund (GCF), or various UN-affiliated organizations focused on environment and energy. They may also engage in policy and advocacy work at environmental and energy-related NGOs both in Korea and abroad. The demand for professionals who can combine technical expertise with policy insight is rapidly growing in both international and civil society arenas.

Part. 3

2026 Graduate Admission Guidelines



1. Admissions Quota

Application Unit	Degree programs	Number of Students
Department of Energy Engineering	Master's program	25
	Integrated Master's and Doctoral program	
	Doctoral program	

- ※ The number of students to be recruited is the sum of students to be recruited for the Spring & Fall Admission in 2026.
- ※ The single Department of Energy Engineering (Operating 12 Major Research Fields & 5 Concentrations)

2. Eligibility

Eligibility for Application	Degree programs	
	Master's program / Integrated Master's and Doctoral program	Doctoral program
Level of Education	A bachelor's degree or higher	A master's degree or higher
	※ Applicants must hold the aforementioned academic degree or recognized equivalent degree from an accredited institution.	
International Admission	I	· Applicants and both of their parents must not hold Korean nationality.
	II	· Applicants who have completed their education outside of Korea, equivalent to the period from the first year of Elementary school to the final year of a Bachelor's program in Korea. · Applicants who have completed their education outside of Korea, equivalent to the period from the first year of Elementary school to the final year of a Master's program in Korea.
Entry Requirement for English Competence	· All applicants must satisfy conditions for English competence at the point of application.	

- ※ Applicants must satisfy ALL eligibility conditions to be accepted.
- ※ Eligibility of International Admission must meet one of the two options, not both.

3. Admissions Timeline

	2026 Spring	2026 Fall
Online Application	September 26, 2025 (Fri) 10:00 ~ October 16, 2025 (Thu) 18:00	April 3, 2026 (Fri) 10:00 ~ April 16, 2026 (Thu) 18:00
	· Online Application: KENTECH Website (https://kentech.ac.kr) · Online application is completed only if applicants have paid the application fee (80,000 KRW) and their application numbers have been assigned to them.	
Document Submission Deadline	September 26, 2025 (Fri) 10:00 ~ October 17, 2025 (Fri) 18:00	April 3, 2026 (Fri) 10:00 ~ April 17, 2026 (Fri) 18:00
	· Documents must be combined and uploaded as a single PDF file (excluding recommendation letter). · The recommendation letter must arrive at the KENTECH admissions center via e-mail attachment. 1. Applicant enters the recommender's e-mail address on the KENTECH application website. 2. Applicant forwards the recommendation letter form of the KENTECH to the recommender. 3. The recommender writes and signs the recommendation letter, convert it into PDF format, and submits it via e-mail (KENTECH e-mail address: recommendation@kentech.ac.kr).	
Online Interview (Optional)	November 17, 2025 (Mon) ~ November 23, 2025 (Sun)	May 18, 2026 (Mon) ~ May 24, 2026 (Sun)
	· Interview schedule will be notified individually (To Be Announced)	
Preliminary Decision Announcement	December 4, 2025 (Thu) 17:00	June 4, 2026 (Thu) 17:00
	· Decision Notification: KENTECH Website (https://kentech.ac.kr)	
Submission of Original Documents	December 4, 2025 (Thu) 17:00 ~ December 26, 2025 (Fri) 18:00	June 4, 2026 (Thu) 17:00 ~ June 26, 2026 (Fri) 18:00
	· Please consult the 「Reference Guide for Preliminarily Admitted Applicants」 for information on submission of the original documents. · Applicants will be asked to submit the original copy of application documents that have been submitted electronically through the online application website. The documents must be sent to KENTECH Graduate Office by post. · Preliminary Admissions Decision could be revoked if applicants fail to submit all the required documents within the designated period.	
Final Decision Announcement	January 5, 2026 (Mon) 17:00	July 6, 2026 (Mon) 17:00
	· Decision Notification: KENTECH Website (https://kentech.ac.kr)	
Registration	January 5, 2026 (Mon) 17:00 ~ January 9, 2026 (Fri) 17:00	July 6, 2026 (Mon) 17:00 ~ July 10, 2026 (Fri) 17:00
	· Successful applicants must consult the 「Reference Guide for Admitted Students」 to find out their next steps including final online registration and the Korean visa issuance procedure.	

- ※ Application schedule can change based on extreme situations such as natural disasters and the spread of infectious diseases as well as internal and external campus circumstances. Please note that information on the adjusted application schedule will be announced on KENTECH's website in advance.
- ※ Note: The timeline is based on Korea Standard Time (UTC +09:00).

4. Required Documents

A. International Admission I

Documents to be submitted	Master's	Integrated Master's & Doctoral	Doctoral
Application form (Through application system)	Fill in the form via application website(www.uwayapply.com)		
Personal Statement & Research Plan (Through application system)	1. Must be written in KENTECH's original form 2. (Optional) Contact potential research advisor at KENTECH in advance and specify the desired research lab on the Research Plan.		
Certificate of Graduation (Upload scanned copy)	Bachelor's degree		Bachelor's & Master's degree
	* If a certificate of graduation is not issued, a certificate of enrollment in the given university can be submitted instead.		
Academic transcript (Upload scanned copy)	Transcript from university (including record of transferred university)		Transcript from university (including record of transferred university) and the graduate school
	Nationality Certificate of Parent(s) (1 copy each) <ul style="list-style-type: none"> Submit a copy of an unexpired passport. If unavailable, submit the original/notarized Certificate of Nationality or notarized Identification Card. For Chinese applicants, only a copy of an unexpired passport or the notarized Certificate of Nationality (籍明国证书) issued by the Chinese Public Notary Office (公证处) after Sept. 1st, 2025 are acceptable. Copy of ID card and Family Registration (户口簿) will not be accepted. In case of parents' divorce/death, Certificate of Nationality of only the parent in custody is required. If the applicant has renounced his/her Korean citizenship, the applicant must submit an official proof of renunciation of Korean nationality. 		
Applicant's Certificate of Nationality (Upload scanned copy)	<ul style="list-style-type: none"> Birth Certificate, Certificate of Family Relations, Citizenship Certificate, etc. The applicant and parents' names must be indicated. For Chinese applicants, only the Parent-Child Relationship (系明亲属关系证书) issued from the Chinese Public Notary Office (公证处) after Sep. 1st, 2025 is acceptable. In case of parents' divorce / death, the applicant must submit relevant documents 		
Certificate of Parent-Child Relationship (Upload scanned copy)	<ul style="list-style-type: none"> Birth Certificate, Certificate of Family Relations, Citizenship Certificate, etc. The applicant and parents' names must be indicated. For Chinese applicants, only the Parent-Child Relationship (系明亲属关系证书) issued from the Chinese Public Notary Office (公证处) after Sep. 1st, 2025 is acceptable. In case of parents' divorce / death, the applicant must submit relevant documents 		
Report from the official English test (Upload scanned copy)	TOEFL(PBT, ITP), TOEFL(IBT), TOEIC, NEW TEPS, IELTS		
(Optional) Recommendation Letter (Must be sent via E-mail)	A recommendation letter from a professor in the school to which the applicant is affiliated. The letter must be sent via E-mail to the following address. recommendation@kentech.ac.kr		
(Optional) Documents for verifying other types of student achievement (Upload scanned copy)	Research papers, award-winning results, granted patents, etc. Certificates or licenses that are evaluated to show the capabilities and the potential of the candidate. Applicants who are currently in a doctoral program can submit their master's thesis.		

* All documents must be submitted in English. If the document is not in English, applicants must submit both the original and notarized translation version.

* A person who graduated or is expected to graduate from a university located in another country must submit Certificate of Graduation and Academic Transcript with an apostille or documents notarized by an embassy.

* Verification documents must be combined and uploaded as a single PDF file.

B. International Admission II

Documents to be submitted	Master's	Integrated Master's & Doctoral	Doctoral
Application form (Through application system)	Fill in the form via application website(www.uwayapply.com)		
Cover Letter & Research Plan (Through application system)	1. Must be written in KENTECH's original form 2. (Optional) Contact potential research advisor at KENTECH in advance and specify the desired research lab on the Research Plan.		
Certificate of Graduation (Upload scanned copy)	bachelor's degree		bachelor's & master's degree
	* If a certificate of graduation is not issued, a certificate of enrollment in the given university can be submitted instead.		
Academic transcript (Upload scanned copy)	Transcript from university (including record of transferred university)		Transcript from university (including record of transferred university) and the graduate school
	1. High School Graduation Certificate 2. Academic Transcript from G1 ~ G12 * May submit transcript of Y2 ~ Y13 or transcript of 11 years depending on the grading system * Applicants who skipped grades or graduated early must submit an Explanatory Statement with evidences		
G1 ~ G12 Documents (Upload scanned copy)	1. High School Graduation Certificate 2. Academic Transcript from G1 ~ G12 * May submit transcript of Y2 ~ Y13 or transcript of 11 years depending on the grading system * Applicants who skipped grades or graduated early must submit an Explanatory Statement with evidences		
Applicant's Certificate of Nationality (Upload scanned copy)	<ul style="list-style-type: none"> Submit a copy of an unexpired passport. If unavailable, submit the original/notarized National Certificate of Nationality or a notarized Identification Card. For Chinese applicants, only a copy of an unexpired passport or the notarized Certificate of Nationality (国籍证明书) issued by the Chinese Public Notary Office (公证处) after Sep. 1st, 2025 is acceptable. <ul style="list-style-type: none"> Copy of ID card or Family Registration (户口簿) will not be accepted. If the applicant has dual nationality, the applicant must submit a proof of dual nationality. If the applicant is a married immigrant, the applicant must submit a proof of nationality acquisition and the certificate of marriage. 		

Documents to be submitted	Master's	Integrated Master's & Doctoral	Doctoral
Certificate of the Entry & Exit (Upload scanned copy)	<ul style="list-style-type: none"> It must contain complete records from the applicant's date of birth to Sep. 1st, 2025. Applicants who had stayed in Korea for more than 30 consecutive days in the middle of the semester must submit an Explanatory Statement. The passport number on the passport copy must correspond to the passport number on the Certificate of the Entry & Exit. If not, applicants must submit copies of both their old and new passport and the certificate of passport issuance. If the applicant has dual nationality, the applicant must submit the Certificate of Facts concerning the Entry and Exit applicable to each passport of each nationality, respectively. Official documents proving the applicant's enrollment in all elementary, middle, and high schools can substitute the Certificate of the Entry & Exit. 		
Report from the official English test (Upload scanned copy)	TOEFL(PBT, ITP), TOEFL(IBT), TOEIC, NEW TEPS, IELTS		
(Optional) Recommendation Letter (Must be sent via E-mail)	A recommendation letter from a professor in the school to which the applicant is affiliated. The letter must be sent via E-mail to the following address. recommendation@kentech.ac.kr		
(Optional) Documents for verifying other types of student achievement (Upload scanned copy)	Research papers, award-winning results, granted patents, etc. Certificates or licenses that are evaluated to show the capabilities and the potential of the candidate. Applicants who are currently in a doctoral program can submit their master's thesis.		

* All documents must be submitted in English. If the document is not in English, applicants must submit both the original and notarized translation version.

* A person who graduated or is expected to graduate from a university located in another country must submit Certificate of Graduation and Academic Transcript with an apostille or documents notarized by an embassy.

* Verification documents must be combined and uploaded as a single PDF file.

5. Requirement for English Competence

All applicants must satisfy one of the requirement for English competence stated below.

TOEFL (PBT, ITP)	TOEFL (IBT)	TOEIC	NEW TEPS	IELTS
550 or higher	79 or higher	750 or higher	285 or higher	6.0 or higher

* An application cannot be submitted if the entry requirement for English competence is not satisfied.

* Applicants can only use the official English test scores that were obtained within 2 years prior to the closing date of submission of the application form. Official English test scores announced after the closing date of submission of the application form will not be accepted.

* Requirement for English competence are waived to a person who has obtained or is expected to obtain an academic degree from a university located in a country* whom uses English as their National/Official language

· Total of seven countries : Guyana, New Zealand, the United States, Ireland, the United Kingdom, Canada, Australia).

6. Application Guide

- Applicants must complete the online application by clicking the link announced on Uwayapply (<http://www.uwayapply.com>) or the website for admission to the graduate school of KENTECH (<https://kentech.ac.kr>).
- Applicants cannot submit additional documents after the closing date for document submission.
- Applicants can find the forms for the cover letter and the research plan on the website for admission to the graduate school of KENTECH.
- Applicants must scan the original documents of certificates of (expected) graduation (in English) and academic transcripts including all GPA from universities or graduate schools, with official seals from the respective educational institutions, and submit the scanned files. Printed documents for checking certificates or screen captures cannot be accepted.
- The letter of recommendation is an optional document, and applicants will not face any disadvantage if they do not submit this document.
- Applicants cannot change their existing application information or perform additional application submissions after the closing date for online application submission.
- Applicants are responsible for disadvantages due to problems that they caused during the application, such as errors, missing information, or incorrect information.
- Applicants must agree with the policy on the use of personal information to complete their application. The personal information collected is used only for the purposes related to application, and personal information on the final selected candidates will be used as data for generating students' records.

7. Evaluation

- Admission decisions are made based on an overall evaluation of the documents submitted by the applicant.
- Applicants may be asked to undertake interviews. In such a case, the applicant will be individually notified of the interview details.

Type	Evaluation methods
Documents Evaluation	The basic learning abilities of applicants are evaluated based on their letters of personal statement, their research plan and all of the scores that they received according to their grades from undergraduate or graduate schools from which they graduated.
Interview (Optional)	Knowledge of candidates related to the proposed area of specific research and their relevant capabilities knowledge as scholars, and English proficiency are evaluated comprehensively.

8. After Preliminary Decision

- After the preliminary admission decision, applicants must submit the original documents with an apostille or authentication issued by the Korean Embassy or Consulate by post/visit.
- Applicants can submit the apostilled or authenticated original documents during the application period.
- We recommend the applicants to prepare the Apostille or Authentication in advance since the process may take a long time in some countries.

9. After Final Decision

- Among the candidates with final acceptance, those who are expected to graduate from their university or graduate school must submit a certificate of graduation to KENTECH Admissions Office within a month after admission. If they do not submit such documents, they will be regarded as having failed to obtain a degree from a previous educational institute. Accordingly, their admission can be cancelled.
- Applicants must check their final acceptance status during the period of announcement of the final selection decision. They are responsible for any disadvantages that they face caused by their failure of due diligence to check their acceptance status.
- Applicants must check their acceptance status via KENTECH website, and this information cannot be confirmed by phone.
- If candidates with final acceptance who are expected to graduate from their university or graduate school cannot graduate before the expected admission date, their acceptance status will be cancelled.
- The candidates with final acceptance must register to final online registration within a set period according to the admission guidelines to complete the admission and registration. If they fail to register to final online registration, their admission status will be subject to a cancellation.
- KENTECH prohibits dual registration at educational institutions. If a candidate with final acceptance is currently enrolled at another graduate school for various purposes including learning, completion of courses, or a leave of absence from the graduate school or is accepted at another graduate school through multiple applications, candidate cannot register to both KENTECH and the other graduate school. Dual application can be a subject to cancellation of final acceptance. If the candidate with the final acceptance is not willing to register for KENTECH, candidate must promptly inform KENTECH's Admissions Office about their intention to forfeit the registration at KENTECH.

10. Freshman Scholarships for High-Achieving Students

- Selection is based on an evaluation of GPA, English proficiency, and research preparedness.
 - Presidential Fellowship for Graduate Students I : Limited number(not fixed)
 - Presidential Fellowship for Graduate Students II : Limited number(not fixed)

11. Student Notice

- ALL documents submitted will not be returned to the candidates.
- Candidates who are asked to take interview but did not participate will be disqualified.
- Details on evaluations and evaluation scores will not be released to the public.
- If it is confirmed that an applicant passed the selection process or enrolled in KENTECH after including incorrect information in the submitted documents, falsifying these documents, or applying other illegal methods; In that case candidate's acceptance or admission status can be cancelled.
- Other details that are not specified in this application handbook will be determined by the decisions of the Application Management Committee for KENTECH Graduate School Admission.
- KENTECH reserves the right to revoke an offer of admission, at any time, including after a student is enrolled at the KENTECH, or nullify graduation if any of the submitted materials are determined to be falsifying or counterfeit.

12. KENTECH Graduate Admissions Information

Document Submission Address	B-202, Administrative lecture building, 21, kentech-gil Naju, Jeonnam 58330, Republic of Korea
Admissions Inquiry	gradadmissions@kentech.ac.kr
Admissions Website	https://admission.kentech.ac.kr
Graduate School Website	https://gs.kentech.ac.kr





Graduate School of KENTECH

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