

SCHOOL OF INTERNATIONAL ENGINEERING AND SCIENCE



GREETINGS



The newly established Major of Engineering and Science in 2018 is aiming at educational research that fuses diverse disciplines with undergraduate engineering paradigms. The goal of our department is not only to foster new industrial technology leaders to produce electronic circuits, sensors, devices and various electronic products by integrating advanced nanotechnology, but also to educate knowledge of various fields such as chemistry, physics, electricity, electronics, materials through independent research and learning.

In addition, we are pursuing a vision to grow as a leading research center in the Northeast Asian era, as an institution that fosters professionals and intellectuals who contribute to society development, and as the center of industry university cooperation that promotes regional innovation.

To this end, we are making efforts to contribute to the local community through the development of students' potential, and to contribute to the community as a brain resource for community development.

I promise to work with competitive professors to develop and educate curriculum that responds to social change, and to devote all my efforts to cultivating students' potential and creativity.

Thank you.

January, 2022

Lee Seung Beop, Dean

School of International Engineering and Science,
Jeonbuk National University

EDUCATIONAL OBJECTIVES

The School of International Engineering and Science is to achieve excellence in engineering and science areas of undergraduate education, graduate education, research, and public service. The School of International Engineering and Science provides superior and comprehensive educational opportunities at the baccalaureate through various fields and special professional educational levels.

The School of International Engineering and Science contributes to the advancement of society through fostering new engineering leaders, research, scholarly inquiry, and the development of new knowledge.

HISTORY

March 2018**Start of The School of International Engineering and Science**

In March 2018, The School of International Engineering and Science was officially opened. Since then, Every classes in SIES are held by English and it is motivated students think internationally.

March 2020**Growth of The School of International Engineering and Science**

In March 2020, The School of International Engineering and Science had added a new curriculum for expanding engineering and science fields'. Also, SIES joined the Graduate school of Integrated Energy-AI.

2021 September**Launch New course with Energy New Industry project**

In September 2021, The School of International Engineering and Science has officially launched a new course with Energy New Industry Project. Because of a new course, students take class from famous professors in Korea not only in JBNU.

CURRENT STATUS

Teacher and Staff Status

Major of Engineering and Science

Professor	Lecturer	Assistant College	Official	Total
3	9	4	1	17

Student Status

1 Grade		2 Grade		Total 137
Korean	Foreigner	Korean	Foreigner	
11	47	14	19	
3 Grade		4 Grade		
Korean	Foreigner	Korean	Foreigner	
12	30	1	3	

School of International Engineering and Science

Position	Name	Contact Info
Professor	Rho, Won Yeop	☎ 063-219-5598 ✉ rho7272@jbnu.ac.kr 🌐 http://nel.jbnu.ac.kr
	Lee, Seung Beop	☎ 063-219-5607 ✉ seugbeop.lee@jbnu.ac.kr 🌐 http://msd.jbnu.ac.kr
	Hilal Tayara	☎ 063-219-5613 ✉ hilaltayara@jbnu.ac.kr
	Chung Kil-To	☎ 063-270-2478 ✉ kitchong@jbnu.ac.kr
Lecturer	Felipe P. Vista IV	✉ felipe.p.vista.iv@gmail.com
	MD Arifur Rahman	✉ arifur.mpharm@gmail.com

Professor's profile

- Bachelor's degree : Jeonbuk National University
- Master's degree : Seoul National University
- Doctoral degree : Seoul National University

Field of Research | Organic Chemistry

Details

- Dye-sensitized solar cells
- Perovskite solar cells
- Anodization
- Synthesis of Nanomaterials
- Surface Modification



PROFESSOR
Rho, Won-Yeop



PROFESSOR
Lee, Seung-Beop



PROFESSOR
Hilal Tayara



PROFESSOR
Chung, Kil-To

- Bachelor's degree : KwangWoon University
- Master's degree : KAIST (Korea Advanced Institute of Science and Technology)
- Doctoral degree : KAIST (Korea Advanced Institute of Science and Technology)

Field of Research | AI & Design Optimization

Details

- AI-based design optimization for solar systems(i.e. solar cell & module, solar power station, smart grid stabilization, etc.)
- Design optimization for electromagnetic systems(e.g. wireless power transfer systems for EVs, solar power station, electric motor, etc.)
- AI-based design optimization for new drug

- Bachelor's degree : Aleppo University(Syria)
- Master's degree : Jeonbuk National University
- Doctoral degree : Jeonbuk National University

Field of Research | algorism, AI etc.

Details

- Vehicle detection and counting in high-resolution (major treatise)
- aerial images using convolutional regression neural network
- Object detection in very high-resolution aerial images using
- one-stage densely connected feature pyramid network
- iSS-CNN: Identifying splicing sites using convolution neural network
- Identification of prokaryotic promoters and their strength by integrating heterogeneous features
- Improving the Quantification of DNA Sequences Using Evolutionary Information Based on Deep Learning

- Bachelor's degree : Texas A&M, USA
- Master's degree : Texas A&M, USA
- Doctoral degree : Texas A&M, USA

Field of Research | AI & Automatic Control

Details

- Use of regressive neural networks to form dynamic characteristics model of complex process
- Comparison of neural networks and existing methods in identifying probabilistic nonlinear systems
- Active suspension control using optimal control and neural network



LECTURER
Felipe P. Vista IV

- Bachelor's degree : University of St. La Salle(Philippines)
- Master's degree : Western Institute of Technology(Philippines)
- Doctoral degree : Jeonbuk National University

Field of Research | Electronic and Information Engineering

Details

- MRI Carotid Artery Images to 3d Model
- Utilize GPS Carrier-phase to Improve Position, Heading and Attitude
- Improving Accuracy of Fused Heading Data for Marine Navigation from Cheap GPS, Electronic Compass and IMU
- Development of High Precision Auto Pilot System using GPS and Digital Compass
- Use of LabVIEW, MATLAB, Visual Studio, Qt, Arduino, Linux, Windows on desktop and embedded boards



LECTURER
MD Arifur Rahman

- Bachelor's degree : Southeast University(Bangladesh)
- Master's degree : State University of Bangladesh
- Doctoral degree : Jeonbuk National University

Field of Research | 'Axon Guidance' (Drosophila melanogaster) as well as finding the novel gene responsible for long time memory and neural Plasticity

Details

- Isolation & Identification of Bio-active compounds from Medicinal Plants
- Drug design & Discovery; Cancer Biology and Computer Aided Drug Designing.

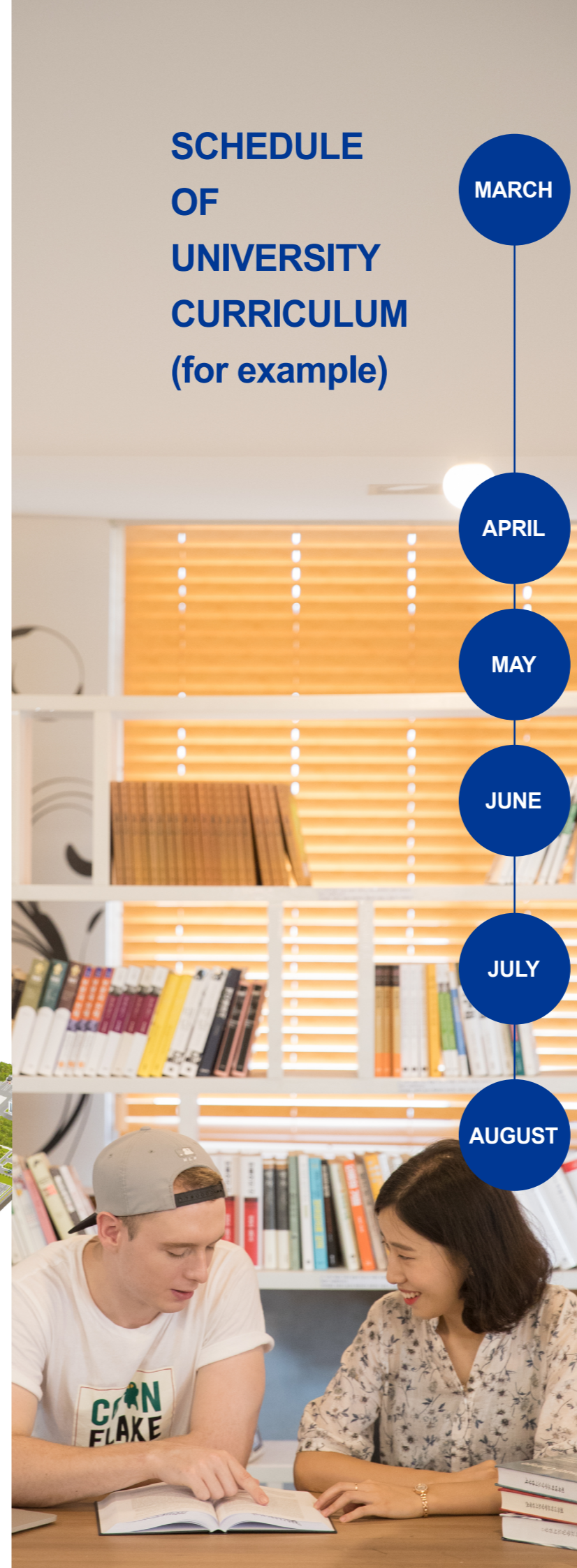
MAP

Deaprtmnet office

JBNU ↔ Global Frontier College ↔ 234, 2nd Floor



SCHEDULE OF UNIVERSITY CURRICULUM (for example)



MARCH

- 02 : 1st semester begins
- 02 ~ 08 : 1st semester course registration change (additional) period
- 03 : General Graduate School Comprehensive Examination
- 29 : 1/4 of the number of class days
- 29 ~ 31 : Application for review of doctoral thesis at general graduate school• 1/4 class days

APRIL

- 19 ~ 21 : Application for review of master's thesis at general graduate school
- 22 : 2/4 of the number of class days
- 29 : Midterm exam completed

MAY

- 01 : Labor Day
- 20 : 3/4 of the number of class days

JUNE

- 20 : End of the first semester, final exam completed
- 21 : start of summer vacation
- 22 : Start of summer season class

JULY

- 12 : End of summer season class
- 13 : Start of summer special semester
- 27 ~ 29 : Preliminary course registration for the second semester of 2022

AUGUST

- 04 : Course registration for the second semester of 2022
- 12 : End of summer special semester
- 22 : The award ceremony for the late 2021 school year
- 25 : 2nd semester general graduate school foreign language test
- 31 : End of first semester, end of summer vacation

* This is only example you could check detail information on University website.

1st Grade Liberal Arts Course

Global Frontier College			Major of Engineering and Science	
Classification			Spring semester	Fall semester
Basic liberal arts	Literacy	고전,명저읽기 (Reading of Classic Masterpiece)	3	
	Thinking	컴퓨팅사고와인간 (Computational thinking and Human)	-	3
	Expressivness	글쓰기 (Writing)	3	-
실용영어 (Practical English)		3	-	
Core liberal arts	Nature	일반물리학1 (General Physics 1)	3	-
		일반물리학2 (General Physics 2)	-	3
		일반화학1 (General Chemistry 1)	3	-
		일반화학2 (General Chemistry 2)	-	3
	Society	경제학의이해 (Understanding of Economics)	3	-
	Human	문화의이해 (Understanding of Culture)	-	3
Additional Selection of Core Liberal arts			3	
General liberal arts	Freshman Settlement / Student Guidance	College Life and Career Design	1	
Additional Selection among Basic, Core and General Liberal arts area			5	
Additional credits from Liberal arts			3	
Total			MIN	MAX
			39	42

2~4 Grade Major Courses

Grade	Semester	Classification	COURSE	Credit	Lecture	Experiment
2	1st	전필 R	• 전공진로설계1 (Major Career Design 1) • 유기화학1 (Organic Chemistry 1) • 프로그램 기반 회로이론1 (Programming based Circuit Theory 1)	0.5 3 3	1 3 3	0
		전선 E	• 미분방정식 (Differential Equation) • 바이오전자기학 (Electromagnetics for Biology) • 이공 C 프로그래밍 (Engineering Science C Programming) • 이산구조 (Discrete Structure)	3	3	0
	2nd	전필 R	• 전공진로설계2 (Major Career Design 2) • Python 프로그래밍 및 응용 (Python Programming and Application) • 데이터구조 (Data Structure)	0.5 3 3	1 3 3	0
		전선 E	• 바이오통기화학 (Bioelectrochemistry) • 선형대수학 (Linear Algebra) • 유기화학2 (Organic Chemistry 2) • 프로그램 기반 회로이론 2 (Programming based Circuit Theory 2)	3	3	0
3	1st	전필 R	• 전공진로설계3 (Major Career Design 3) • Python기반 기초기계학습 (Python based Basic Machine Learning) • 알고리즘개론 (Introduction to Algorism)	0.5 3 3	1 3 3	0
		전선 E	• 고분자과학 (Polymer Science & Technique) • 디지털공학 1 (Digital Engineering 1) • 바이오에너지저장공학1 (Energy storage engineer for bioenergy1) • 확률 및 통계 (Probability & Statistics)	3	3	0
	2nd	전필 R	• 전공진로설계4 (Major Career Design 4)	0.5	1	0
		전선 E	• 디지털공학2 (Digital Engineering) • 물리화학 (Physical Chemistry) • 바이오인포메틱스 (Fundamental of Bio-informatics) • 반도체공학 (Engineering of Semiconductor) • 바이오에너지저장공학2 (Energy storage engineer for bioenergy2) • 창의공학설계1 (Creative Engineering Design 1)	3	3	0
4	1st	전필 R	• 전공진로설계5 (Major Career Design 5)	0.5	1	0
		전선 E	• 메카트로닉스 (Mechatronics) • 디스플레이공학 (Display Engineering) • 바이오밀리미터파회로설계 (Millimeter wave circuit design for biology) • 인공지능 (Artificial Intelligence) • 창의공학설계2 (Creative Engineering Design 2)	3	3	0
	2nd	전필 R	• 전공진로설계6 (Major Career Design 6)	0.5	1	0
		전선 E	• 유연인쇄전자공학 (Flexible and Printable Electronics) • 에너지광전소자 (Device for Energy Conversion) • 에너지시스템최적설계프로젝트 (Design Optimization Project for Energy System) • 로봇공학 (Robotics) • 바이오수소연료전지 (Biofuel cells)	3	3	0

APPLICATION SCHEDULE (SPRING SEMESTER)

Contents	1 st Round	2 nd Round	Remarks
Application Period	September 1st ~ October 1st	November 1st	- Submit application on JINHAK APPLY (Ⓞ http://www.jinhakapply.com/) - Application Fee : KRW 80,000 - It is required to submit an application form and other document after online registration
Required Document Submission	October 1st	November 1st	- Submit it by visiting or post office - Mailed documents will be accepted with the postmarked of the deadline
Notice of Interview Schedule	October 1st	December 1st	- Announcement to be made online on Jeonbuk National University webpage or email (Ⓞ www.jbnu.ac.kr/)
Interview	November 1st	December 1st	- Interview will be conducted by each departments - If the applicant resides in overseas, interview will be conducted via mobile or video call - Applicant will be disqualified if absent
Announcement of Successful Applicants	November 1st	December 1st	- Announcement to be made on Jeonbuk National University webpage or email (Ⓞ www.jbnu.ac.kr/)
Additional Language Certificate Submission	until December 1st		- Submit it by visiting or by post office - Only those applicants who submitted Language Certificate till 12. 27 (Fri) can get scholarship - Final deadline of submitting language certificate (can't get academic scholarship): 2. 12 (Wed)
Diploma / apostille submission	until February 1st		- Submit original document - only for to be graduates by Feb of 2020
Bank Statement Submission	To be determined (Successful Applicants Only)		- Submit only original document ※ Those who stay in Korean, it is only possible to submit Bank Statement Submission from a Korean Bank
Issuance of Certificate of Admission	To be determined		- Certificate of Admission will be issued to successful applicants who have (Paid the tuition, Submitted all the documents, Acquired visa (D-2))
Tuition payment schedule	To be determined		- Payment schedule will be announced in a timely manner - Make payment at designated banks
Semester Begins	March 1st		- Spring semester, 2020

※ The schedule maybe changed and it will be announced upon any changes (any changes or amendments will be announced on the website) : <http://ioffice.cbnu.edu> (JBNU office of International Cooperation)

APPLICATION SCHEDULE (FALL SEMESTER)

Contents	1 st Round	2 nd Round	Remarks
Application Period	April 1st	May 1st	- Online Application - It is required to submit an application form and other documents after online registration
Required Document Submission	April 1st	June 1st	- Submit it by post - Mailed documents will be accepted with the postmarked of the deadline
Notice of Interview Schedule	April 1st	June 1st	- Announcement to be made online on Jeonbuk National University webpage or email (Ⓞ www.jbnu.ac.kr/)
Interview	May 1st	June 1st	- Interview will be conducted by each departments - interview will be conducted via mobile or video call - Applicant will be disqualified if misses the interview
Announcement of Successful Applicants	May 1st	July 1st	- Announcement to be made on Jeonbuk National University webpage or email (Ⓞ www.jbnu.ac.kr/)
Additional Language Certificate Submission	until July 1st		- Submit it by post or e-mail (✉ admissionu@jbnu.ac.kr) - Only those applicants who submitted Language Certificate until 7.5(Fri) can get scholarship - Final deadline for submitting language certificate is 8.14(Wed) (but no academic scholarship)
Diploma / apostille submission	until August 1st		- Submit original document - only for to be graduates by Feb of 2020
Bank Statement Submission	To be determined (Successful Applicants Only)		- Submit original document - Students who stay in overseas : Bank account on applicant's name or on parent's name is acceptable (as well foreign bank accounts) - Students who stay in Korea : Only korean bank account on applicant's name is acceptable
Issuance of Certificate of Admission	To be determined		- Certificate of Admission will be issued to successful applicants who have (Paid the tuition, Submitted all the documents, Acquired visa (D-2))
Tuition payment schedule	To be determined		- Payment schedule will be announced in a timely manner - Make payment at designated banks
Semester Begins	September 1st		- Fall semester, 2020

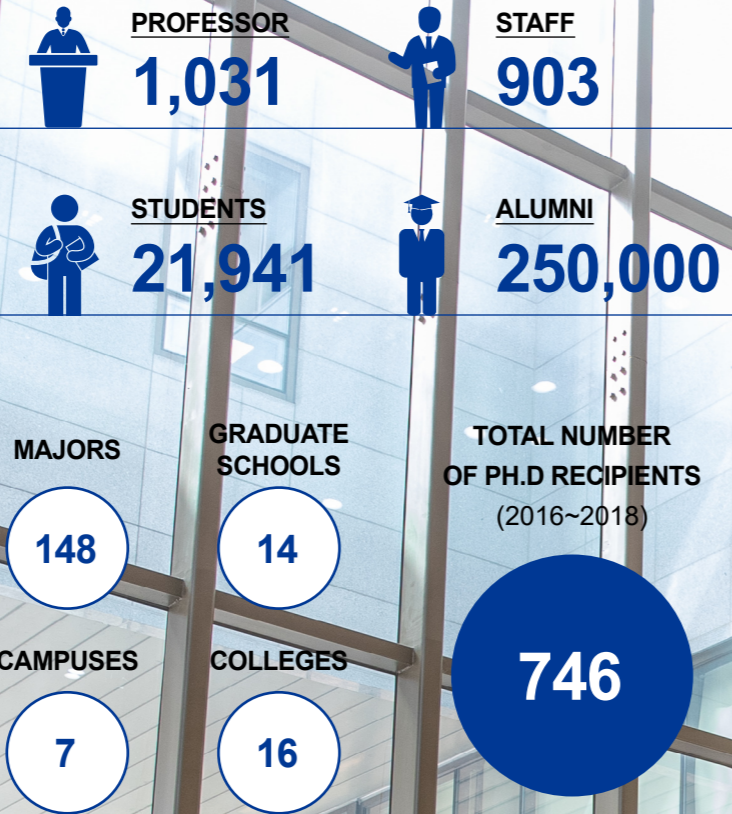
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JBNU NOW

(APRIL, 2019)

JBNU is a member university of KNU10 Flagship National Universities. Professors and researchers are actively engaged in teaching and research, making significant contributions in the areas of engineering and agriculture

※ KNU10: Korea's 10 Comprehensive Flagship National Universities



JBNU RANKINGS

UNIVERSITY AS A WHOLE

REUTERS

Asia Pacific's Most Innovative Universities(2018)
Among Korean Flagship National Universities



QS

World University Rankings (2013~2019) **TOP 2**

Among Korean Flagship National Universities, 501-550(2018)

QS

Asia University Rankings (2013~2019) **TOP 2**

Among Korean Flagship National Universities, 92(2018)

THE

World University Rankings (2013~2019) **TOP 2**

Among Korean Flagship National Universities, 601-850(2018)

THE

Asia University Rankings (2013~2019) **TOP 2**

Among Korean Flagship National Universities

QS SUBJECTS

Engineering-Electrical and Electronic (2018)	Materials Science (2018)	Engineering-Mechanical (2018)
251-300	201-250	201-250

EXCELLENCE IN EDUCATION

Investing in Educational Projects for Students



TOP 1
Among Korean Flagship National Universities (2017, JoongAng Daily)
Quality University Education

TOP 1
(2019, KS-SQI*) *Korean Standard-Service Quality Index
Satisfaction of Student Services

TOP 2
Among Korean Flagship National Universities
Education Expenses per Student

5,045

Total Capacity of Residence Halls (2019)

100

Eco-friendly Smart Class Rooms

TOP 1

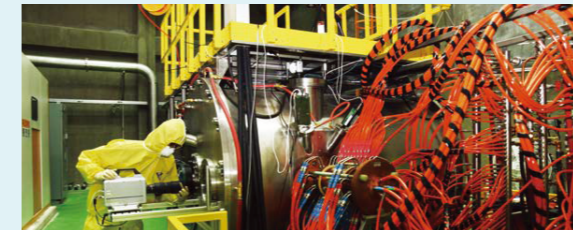
University Library Evaluation in the Nation (2017)

5

Makerspaces for Problem-Based Learning and Critical Thinking (2019)

RESEARCH FACILITIES

World-renowned



The 1st in Korea, the 5th in the World
High-enthalpy Plasma Research Center



Top in Asia
Korea Zoonosis Research Institute



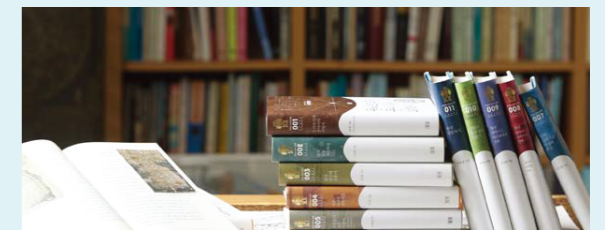
The 1st University-owned LED Plant Factory
LED Agriculture & Life Science Convergence Technology Research Center



Structural Behavior Analysis
LANL-JBNU Engineering Institute Korea



Regional Innovation Park
Center for Industrialization of Agricultural and Livestock Microorganisms



Publication of the "Science and Civilization in Korea series" in Cooperation with Cambridge University
The Korean Research Institute of Science, Technology and Civilization



The 1st Non-governmental Organization Selected as Cultural Heritage by UNESCO among Academic Institutions in Korea
The Center for Intangible Culture Studies

알찬
대학
따뜻한
동행



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