

## Majors



### Bioscience

Educate professionals who will learn about technologies necessary to understand omics, bioscience-based vital phenomena, and biosignal transmission and contribute to various bioscience technologies that are critical to the Fourth Industrial Revolution.

#### Functional Genomics

- Discover genes related to various diseases (e.g., cancer, diabetes) and identify mechanisms
- Develop personalized precise medical technology through multiomics analysis
- Develop technology based on stem cell research and conduct applied research in regenerative medicine

#### Proteome Structural Biology

- Identify proteome structures and functions based on proteome structured biology
- Develop proteome structure-based new drugs, vaccines for contagious diseases, and diagnosis technology
- Develop next-generation proteome analysis technology based on BT-NT-IT convergence

#### Bioinformatics

- Efficiently analyze bio big data such as genome and transcriptome
- Discover biomarkers through comprehensive analysis of omics information
- Secure individual genome and expertise in the era of precise medicine

#### Bio-molecular Science

- Develop diagnostic methods for disease medicine (compounds, medical supplies)
- Research organic molecules based on an integrated understanding of biology and chemistry
- Research genome editing and develop original materials for herbal medicine

### Biotechnology

Our research can be applied to a wide range of areas such as environmental protection, food production, disease prevention, and energy production. We produce high-quality bioscience researchers to lead 21st-century bioeconomics based on theoretical and practical education.

#### Nanobiotechnology

- Research disease diagnosis and treatment using nanobiotechnology
- Conduct research on development and use of functional nanobiomaterials
- Conduct research related to high-sensitive biosensors/chips and biointerfacing

#### Biosystems and Bioengineering

- Conduct research on the principles and interactions of bioelements, such as genes, proteins, and metabolic circuits
- Conduct research on componentization, standardization, and modularization of bio elements
- Redesign biosystems and develop and use artificial biosystems

#### Applied Biological Engineering

- Development of Pharmaceutical Materials and Biochemical Materials
- Development of Pharmaceutical/ Biochemical Materials Process
- Development of Pharmaceuticals, Pharmaceutical Materials/efficacy evaluation Technology

#### Bioresource & Environmental Engineering

- Physiological omics analysis of bacteria, microalgae, archaea, and fungi
- Discover beneficial microbial materials and produce biomaterials through metabolic engineering
- Restore aquatic ecosystems, develop bioprocesses and CO<sub>2</sub> conversion/reduction technologies



www.kribb.re.kr



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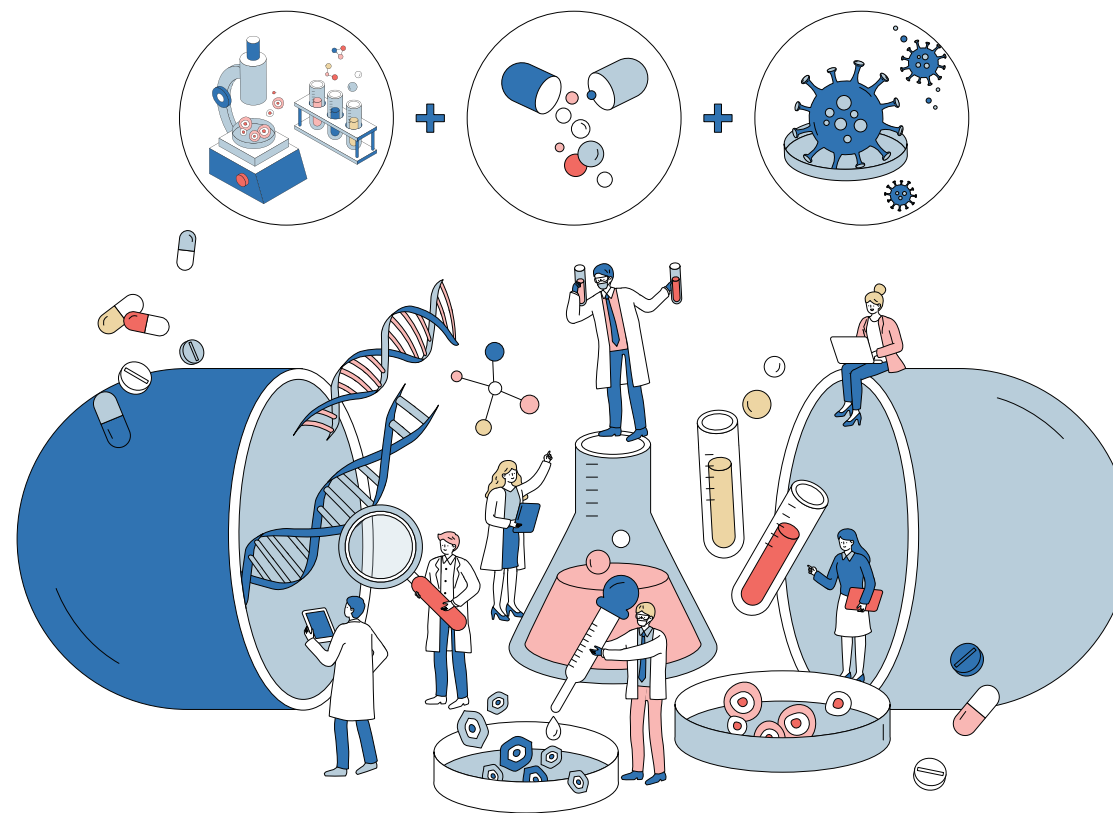
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(Admissions) <https://admission.ust.ac.kr>

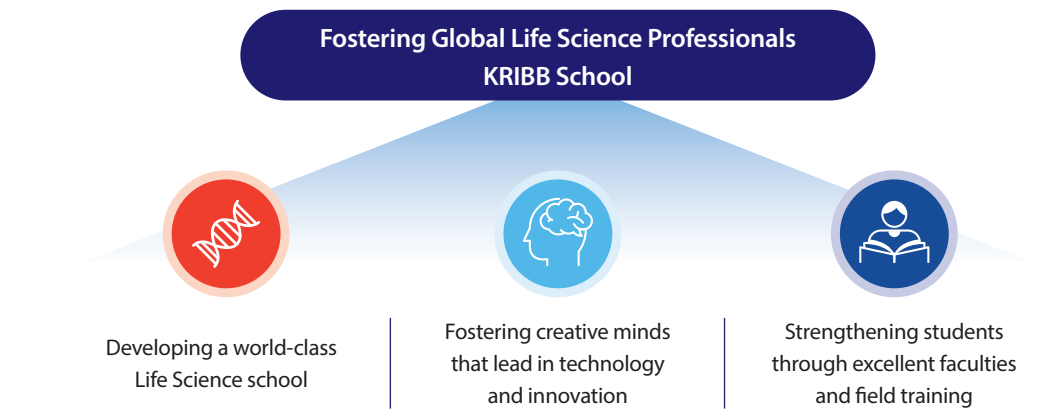


# KRIBB School, UST

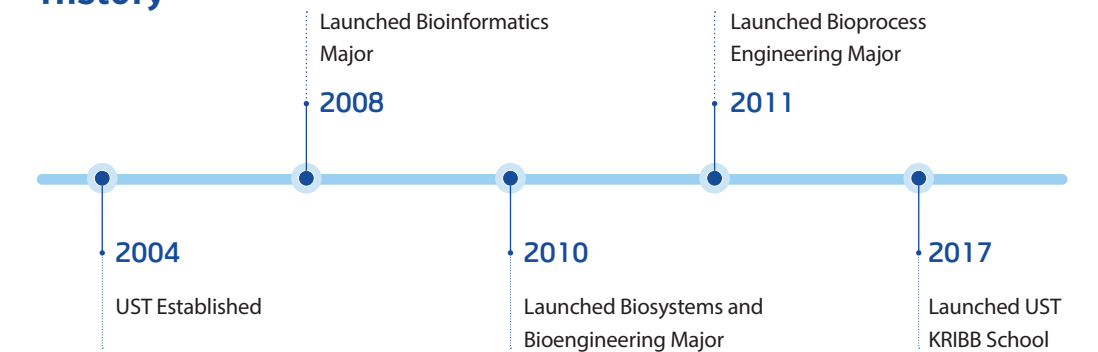
“We Train Global Bio-Professionals”



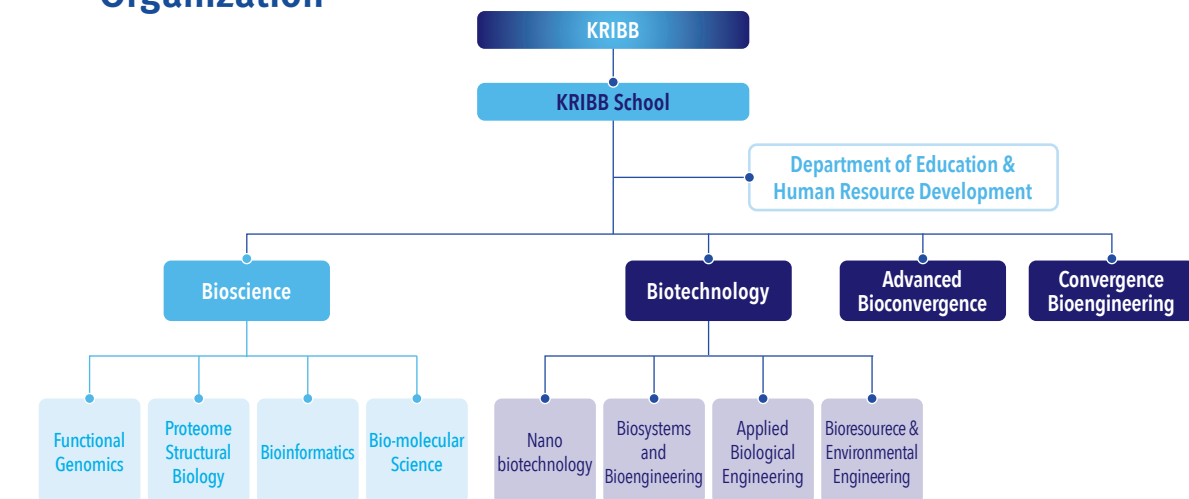
## Vision



## History



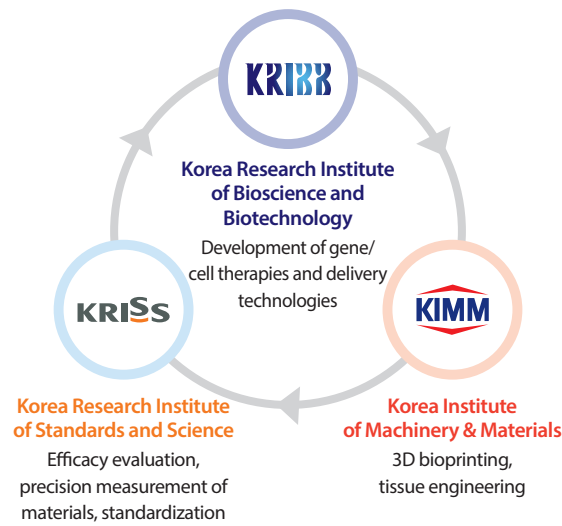
## Organization





## Flagship Convergence Major \_ Advanced Bioconvergence Department

- A convergence major specializing in advanced biotechnology (gene/cell therapy)—one of the 12 National Strategic Technologies—designed to create synergies in education and research through inter-school collaboration
- A single major jointly run by multiple schools to realize interdisciplinary education and foster organic education/research collaborations.



### Goal

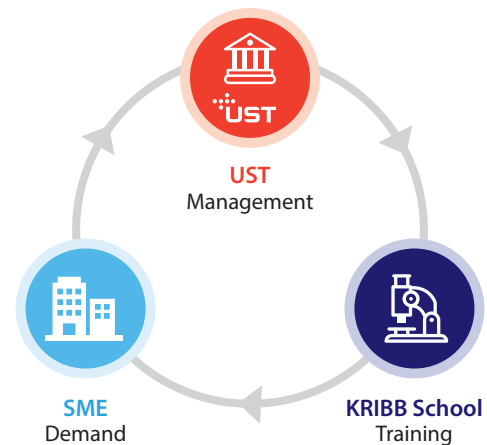
- To foster the development of world-class interdisciplinary talent in gene/cell therapy, fields, which are highly applicable to advanced biopharmaceuticals (preclinical evaluation, production/processes, stem cell and regenerative therapies, etc.)

### Field of education

- Gene therapy, immune cell therapy, mRNA/LNP, regenerative therapy, gene editing therapy, ASO therapy, etc.

## ICORE \_ Intergrative Biotechnology

- SMEs-KRIBB School-UST agreement lead to customized training
- Fostering the excellence in research demanded by industry



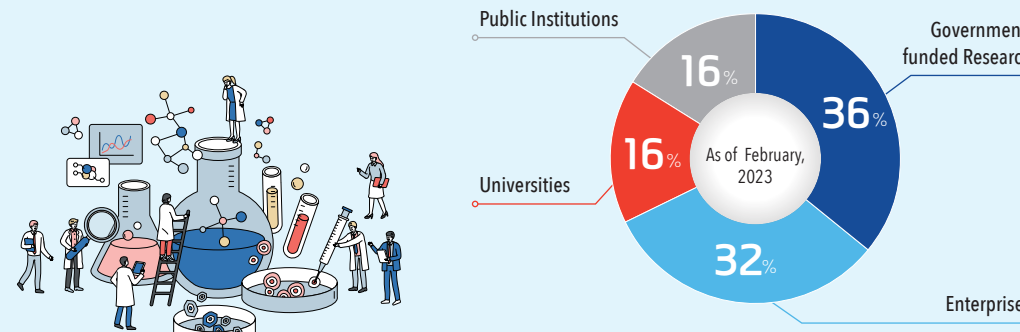
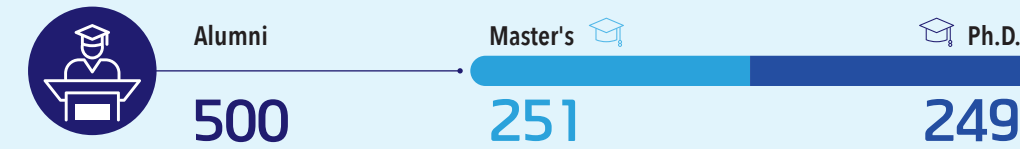
### Future employment (conditional)

- A Degree course leading to employment after graduation

### Retraining type

- A Degree course tailored for incumens' qualitative improvement

## Career Path



Degree holders have job opportunities at government-funded research institutes, public institutions, universities and enterprises

## Benefits

### Training Grant



### Welfare/Rewards



Learning Support



Graduation thesis presentation

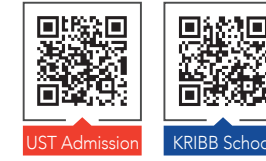


Resting Space



Cultural Events

## Admissions



### Application

Spring Semester: **September ~ October**

Fall Semester: **March ~ April**

### Admission Type



### Requirements

#### • Doctoral Program

- A Master's Degree from a regionally accredited Korean institution or a compatible degree from an international institution is required.
- Qualifications equivalent to a Master's degree or approved by law are required.

#### • Integrative/Master's Program

- A Bachelor's Degree from a regionally accredited Korean institution or a compatible degree from an international institution is required.
- Qualifications equivalent to a Bachelor's degree or approved by law are required.

### Official Test Scores

| Type     | TOEFL(iBT) | TOEIC* | New TEPS | IELTS | TOEIC Speaking | OPic |
|----------|------------|--------|----------|-------|----------------|------|
| General  | 79         | 730    | 277      | 6     | IM3            | IM3  |
| Deafness | 20         | 365    | 166      | 3     |                |      |

- Admission Fairs : February and August Every Year
- UST Global Research Internship(2 months in summer)
- ※ For more information, please refer to <http://www.ust.ac.kr>

### Contact Us

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Technology for Life,  
Our Future

