Making Discoveries for Humanity & Society

IBS School, UST

Spring 2016 Admission

Institute for Basic Science("IBS"), a world-leading research institute in basic science, recruits exceptional graduate students who have dreams of becoming global leaders in basic science research.

Apply Period

September 10, 2015 ~ October 12, 2015

Research Areas and Faculty Members

Research Area	Faculty Member	Career Highlights
Cognition and Sociality (Brain Science)	Director **Hee-Sup Shin**	• Principal Research Scientist, KIST(2001~2012) Associate Professor / Professor, POSTECH(1991~2001) Assistant Professor, MIT(1985~1991) • National Honor Scientist(2006) National Academy of Science Member(2010~)
Genome Engineering (Biochemistry)	Director **Jin-Soo Kim**	• Assistant / Associate / Full Professor, Seoul National University(2005~) CEO / CSO, ToolGen, Inc(1999~2005) • Scientist of the Month(2004)
Underground Physics (Particle Physics)	Director **Yeongduk Kim**	• Professor, Sejong University(1998~2013) • Principal Investigator, KIMS(2012)
Theoretical Physics of the Universe (Theoretical Physics)	Director **Kiwoon Choi**	• Assistant / Associate / Full Professor, KAIST(1994~2013) • Korea Science Award(2011) Thomson Citation Laureate(2007)
Theoretical Physics of Complex Systems (Theoretical Physics)	Director **Sergej Flach**	• Professor, Massey University(2012~) Research Associate / Head of Visitors Program, Max Planck Institute for the Physics of Complex Systems(1994~2012) • Stefanos Pnevmatikos Award(2002)

Admission Overview

Eligibility Outstanding students at home and abroad who want to earn a doctoral degree in basic science

Degree Programs Ph.D. Program, Integrated MS/Ph.D. Program

Field of Study Basic Science

Major Attributes

- IBS Center faculties consist of world-leading scholars
- Advanced infrastructure and research environment
- Research-centered education which allows students to participate in the global advance of research

What We Offer

- A stipend of 24million KRW per year(for Ph.D. students)
- Full tuition scholarships and housing
- Incentives for students who produce outstanding research outcomes
- Opportunities for participating in overseas training programs, international academic conferences, workshops, etc.

Inquiries

- **IBS Human Resources Development Team**
  Kim Young-Eun +82-42-878-8180, yekim@ibs.re.kr
- **UST Student Affairs Team**
  Lee Miji +82-42-865-2334, f_adm@ust.ac.kr

For more information regarding the application, please visit the following websites

- **IBS website** http://www.ibs.re.kr/ibsschool
- **UST website** http://apply.ust.ac.kr

ibs Institute for Basic Science

UST UNIVERSITY OF SCIENCE & TECHNOLOGY

IBS School, UST

Making Discoveries for Humanity & Society

IBS School,
the cradle of basic science
where aspirations grow

ibs Institute for Basic Science
70, Yuseong-daero 1689-gil, Yuseong-gu, Daejeon, Korea
Tel. +82.42.8788.114 Fax. +82.42.8788.079 www.ibs.re.kr

ibs UST

www.ibs.re.kr/ibsschool

Contents

기초과학연구원
Institute for Basic Science

IBS School

UST 과학기술연합대학원대학교
UNIVERSITY OF SCIENCE & TECHNOLOGY

“Internationally recognized scholars of IBS conduct world-leading research with advanced infrastructure.”

Foster leaders in basic science

World-class scholars from IBS centers teach students and advise their research.

World-class infrastructure and research environment

Advanced research facilities and infrastructure of the IBS provide the ideal environment for research.

Research-centered education

IBS provides research-centered education for students to participate in cutting-edge research during their degree.

Research Areas

“ IBS School provides research-oriented education for students to participate in world-leading research. ”

Excellence of researchers

Attract leading scientists around the world and foster talent by providing world-class education.

Creativity of research theme

Place a high priority on innovative research and education that leads a paradigm shift in basic science.

Autonomy of research activity

Cultivate an environment that maximizes the researchers' autonomy in conducting their research.

Openness of research collaboration

Establish research collaborations beyond the boundaries of nations and academic disciplines.

Philosophy

Greetings

We will do our best to realize your dream in IBS School, UST

The Institute for Basic Science (IBS) was established in November 2011 as South Korea's national research hub in basic science in order to contribute to the national development and make groundbreaking discoveries for humanity.

IBS has been undertaking large-scale, mid- to long-term, group-based research that is currently unavailable at universities and other government-funded research institutions based on our four guiding principles – scientific excellence of researchers, openness through research collaboration, creativity of research themes, and autonomy in research.

IBS makes every effort to enable world-leading researchers to perform their research to the utmost of their abilities. We provide a research environment with competent support staff and advanced infrastructure where researchers can fully engage in creative research motivated solely intellectual curiosity.
IBS now aims to foster the next generation of global leaders in basic science. To achieve this goal, IBS and University of Science & Technology (UST) co-established IBS School, UST – a graduate school program specialized in basic science. Courses will commence in September 2015 with the curriculum content mainly provided by IBS HQ research centers.

With its world-renowned faculty and advanced educational infrastructure, IBS School aims to the nation's most competitive graduate school program in basic science. In particular, IBS directors who are highly-established scholars in their respective fields have joined IBS School as faculty members.

By providing an internationally-recognized graduate school program in basic science, IBS School, UST will ensure that future Einsteins are able to unleash their creative potential and pursue their dreams.

IBS President Doochul Kim

To foster global leaders in basic science, we provide advanced education and infrastructure

Welcome to IBS School, UST.

IBS School, UST begins its first school year in September 2015. IBS School is a graduate program specialized in basic science and was co-founded by Institute for Basic Science (IBS) and University of Science and Technology (UST).

IBS School attracts the best students from around the world and provides them with its exceptional educational programs that will help them to play a leading role in global basic research.
Within IBS School, IBS directors will provide courses in basic science that are associated with the major research areas of IBS. Students will directly participate in research projects conducted at IBS centers.

Through research activities that utilize IBS' cutting edge research infrastructure, students will be able to achieve world-class research outcomes, as well as cultivate and acquire strong competencies and capabilities.

Students will also gain extensive knowledge from courses provided by our partner universities. Comprised of IBS researchers, our faculty members actively take part in the overall process of selecting students, supervising their research and developing curriculums.

IBS School prides itself on providing students with the highest level of support. We do this by offering full scholarships, stipends, awards for the best research paper and opportunities to participate in overseas training and exchange programs. These benefits, we feel, are paramount in helping our students develop into outstanding researchers.

We encourage you to embark on your academic career with us. We look forward to helping you achieve your goals to be the next generation of leaders in basic science.

Thank you very much.

Professor Hee-Sup Shin
Dean, IBS School

Vision & Mission

Researchers who lead the Global Paradigm Shift in Basic Science

Vision

Developing Top-notch Scientists Who Make Discoveries for Humanity and Society

Overarching Goals

2014 ~ 2018	2019 ~ 2024	2025 ~ 2030
To lay the foundation for a graduate school program	To cement its reputation as a world-class graduate school program	To lead the global paradigm shift in basic science

Mission Activities

1.	2.	3.	4.
Foster global research leaders with creative potential to usher in a bright future	Discover creative knowledge that leads to a paradigm shift in basic science	Facilitate collaboration and convergence beyond the boundaries of countries and academic disciplines	Disseminate basic science knowledge and expand its social impact

Philosophy

- **Excellence** — Secure a competitive edge and foster talent by providing world-class education
- **Openness** — Establish a research collaboration system that transcends the boundaries of nations and academic disciplines
- **Autonomy** — Cultivate an environment that maximizes the researchers' autonomy in conducting their research
- **Creativity** — Place a high priority on innovative research and education that leads to a paradigm shift in basic science

History & Introduction

History

- **2011. 11** — The Institute for Basic Science (IBS) was established.
- **2012. 12** — IBS joined the University of Science and Technology (UST) as one of its campuses.
- **2014. 09** — IBS School, UST was founded.
- **2015. 03** — IBS School, UST made the first student admission announcement.
- **2015. 09** — IBS School, UST starts its first school year.

IBS School, UST

The Institute for Basic Science (IBS) was established in November 2011 by the South Korean government with the purpose of driving forward the development of basic science. With its internationally recognized researchers and research infrastructures, IBS conducts world-leading research comparable with those global research institutes such as the Max Planck Society in Germany and RIKEN in Japan.

In order to foster the next generation of leaders in basic science, IBS established 'IBS School, UST', a graduate school program, in September 2014. IBS School selects the best students in the world and provides them with research-centered education by allowing them to participate in IBS' leading research. At IBS School, distinguished researchers from across the globe teach and advise students on research.

IBS School provides all students with a generous stipend, tuition grants, dormitory, and other benefits. Moreover, students have the opportunities to participate in overseas training at global universities and research institutions, as well as international academic conferences and workshops.
IBS School operates the integrated MS/Ph.D. program and Ph.D. Program in basic science for outstanding students from around the world. IBS School provides basic science related courses that are associated with the major research areas of IBS research centers, and students who complete the course will receive an IBS School, UST degree.

ccs.ibs.re.kr

Center for Cognition and Sociality

To unravel the neural mechanism of behavior

Director / Prof. Hee-Sup Shin *shin@ibs.re.kr*

Prof. Hee-Sup Shin researches nerve mechanism that controls cognition and sociality by applying various fields like genetics, physiology, opto-genetics, imaging, behavior, etc. In 2006, he was named the first Korean National Scientist. He is a member of the 'National Academy of Sciences, Republic of Korea' and the 'National Academy of Science, USA'.

Education

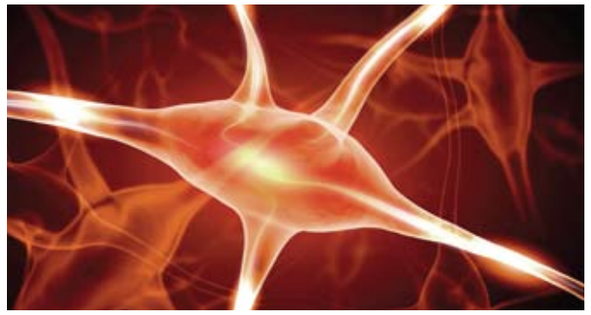
MD, Seoul National University (1974)
PhD, Cornell University (1983)

Major Experience

- *1978-1980 Postdoctoral Fellow in Immunology, Sloan-Kettering Institute for Cancer research*
- *1983-1985 Research Associate in Genetics, Sloan-Kettering Institute for Cancer Research*
- *1985-1991 Assistant Professor, Dept. of Biology, MIT/Associate Member, Whitehead Institute for Biomedical Research*
- *1991-2001 Associate Professor, Professor, Dept. Life Science, POSTECH*
- *1996-1998 Director, Biotechnology Research Center, POSTECH*
- *1997-2003 Director, National CRI Center for Calcium and Learning*
- *2001-2012 Principal Research Scientist, KIST*
- *2005-2011 Director, Center for Neural Science, KIST*
- *2011-2012 Director-General, Brain Science Institute, KIST*
- *2012- Director, Center for Cognition and Sociality, IBS*

Major Publication

- *Phospholipase C isozymes selectively couple to specific neurotransmitter receptor, Nature 389 (1997) 290*
- *Thalamic control of visceral nociception mediated by T-type $Ca2^+$ channels, Science 302 (2003) 117*
- *Observational fear learning involves affective pain system and Cav1.2 $Ca2^+$ channels in ACC, Nat Neurosci 13 (2010) 482*
- *Bidirectional modulation of fear extinction by mediodorsal thalamic firing in mice, Nat Neurosci 15 (2011) 308*
- *Rebound burst firing in the reticular thalamus is not essential for pharmacological absence seizures in mice, PNAS 111 (2014) 11828*



About Center

What we call the mind is enabled by the brain. How this happens in the brain is what we would like to understand. How consciousness is controlled, how we learn and remember things and events, how the emotion is controlled, how we make decisions when needed..... these are among the questions we pursue. We are particularly interested in asking these questions in the context of social behavior: where the name, Center for Cognition and Sociality, came from.
Open collaboration with scientists from diverse disciplines is an essential component of our strategy. We believe important clues to cure various neuropsychiatric diseases as well as approaches to improve human society will be obtained.
Furthermore, our center is to help young neuroscientists to grow to their fullest capacity. We believe, accomplishing this aim will be the most rewarding experience for our center.

Research Area

- *Study on the thalamo-cortical system in control of fear memory*
- *Study on neural mechanisms of empathy behavior*
- *Understanding brain mechanisms for social behavior at molecular, cellular, circuits, and systems levels*

Faculty

Prof. Yee-Joon Kim
joon@ibs.re.kr
PhD, Northwestern University (2008)
Research Fellow / Center for Cognition and Sociality

Prof. Charles-Francois Vincent Latchoumane
charles@ibs.re.kr
PhD, KAIST (2010)
Research Fellow / Center for Cognition and Sociality

cge.ibs.re.kr

Center for Genome Engineering

The whole genome is under our control

Director : Prof. Jin-Soo Kim *jskim01@snu.ac.kr*

Prof. Jin-Soo Kim is an entrepreneur and chemist-turned-biologist. He graduated from Seoul National University in 1987 with a major in chemistry. He then earned a master's degree in chemistry from Seoul National University in 1989 and a Ph.D. in biochemistry from the University of Wisconsin-Madison in 1994. After postdoctoral training at Howard Hughes Medical Institute/Massachusetts Institute of Technology, he came back to Seoul in 1997 to serve as Principal Investigator at Samsung Biomedical Research Institute. He co-founded a biotechnology company, ToolGen, Inc., in 1999 focusing on zinc finger technology and served as CEO and CSO for the subsequent 6 years. He joined the faculty of the Department of Chemistry at Seoul National University in 2005. He now serves as the Director of Center for Genome Engineering at the Institute for Basic Science. He has published over 60 articles and filed 20 patent applications, mostly in the field of gene regulation and genome editing. He has been a member of the Faculty of 1000 since May, 2013.

Education

BS, Seoul National University (1987)
MS, Seoul National University (1989)
PhD, University of Wisconsin-Madison (1994)

Major Experience

- *1994-1997 Research Associate, Howard Hughes Medical Institute/MIT*
- *1997-1999 Principal Investigator, Samsung Biomedical Research Institute*
- *1999-2005 CEO and CSO, ToolGen, Inc*
- *2005- Assistant/Associate/Full Professor, Seoul National University*
- *2014- Director, Center for Genome Engineering, IBS*

Major Publication

- *Targeted genome engineering in human cells with the Cas9 RNA-guided endonuclease, Nature Biotechnol. 31 (2013) 230*
- *A library of TAL effector nucleases spanning the human genome, Nature Biotechnol. 31 (2013) 251*
- *Microhomology-based choice of Cas9 nuclease target sites, Nature Methods 11 (2014) 705*
- *A guide to genome engineering with programmable nucleases, Nature Reviews Genetics 15 (2014) 321*
- *Digenome-seq: Genome-wide profiling of CRISPR-Cas9 off-target effects in human cells, Nature Methods 12 (2015) 237*

About Center

We focus on developing programmable nucleases that enable genome editing in plants, animals, and cultured cells including human pluripotent stem cells. For the last ten years or so, we have developed three different types of programmable nucleases, namely, zinc finger nucleases (ZFNs), transcriptional activator-like effector nucleases (TALENs), and RNA-guided engineered nucleases (RGENs) derived from the type II CRISPR/Cas prokaryotic adaptive immune system. We will continue our efforts to improve and expand genome editing technologies. In addition, we plan to use these powerful tools to discover new genes associated with various disease phenotypes such as viral replication and cancer and to develop novel methods of gene and cell therapy for the treatment of both acquired and genetic diseases. We also focus on developing value-added crops and animals such as genome-engineered pigs appropriate for organ transplantation.

Research Area

- *Target identification and validation for drug discovery using genome-scale collections of TALENs and CRSIPR-Cas9 RNA-guided nucleases*
- *Genome editing in human stem and somatic cells for the treatment of genetic and acquired disorders*
- *Development of genome-engineered pigs appropriate for organ transplantation*
- *Creation of value-added crops using programmable nucleases*

Faculty

Prof. Sang-Gyu Kim
sgkim@ibs.re.kr
PhD, Seoul National University (2009)
Research Fellow / Center for Genome Engineering

Prof. Taeyoung Koo
taeyoungkoo@ibs.re.kr
PhD, Royal Holloway of London, UK (2010)
Research Fellow / Center for Genome Engineering

cupweb.ibs.re.kr

Center for Underground Physics

To resolve the most challenging issues in modern physics

Director : Prof. Yeongduk Kim *ydkim@ibs.re.kr*

Prof. Yeongduk Kim began the KIMS (Korea Invisible Mass Search) project to search the dark matter directly and is representing KIMS group since 2012. He has also actively participated in the neutrino oscillation experiment (RENO), which has successfully measured the 3rd mixing angle of the neutrinos. He is also interested in the neutrinoless double beta decay using scintillating crystals, and is a executive member of AMoRE experiment.

Education

BS, Seoul National University (1985)
PhD, Michigan State University (1991)

Major Experience

- *1991-1992 Researcher, Indiana University*
- *1992-1995 Researcher, High Energy Accelerator Research Organization, Japan*
- *1995-1998 Researcher, Seoul National University*
- *1998- Professor, Department of Physics, Sejong University*
- *2005-2006 Visiting Scholar, Columbia University*
- *2013-2013 Visiting Scholar, Lawrence Livermore National Laboratory*
- *2013- Director, Center for Underground Physics, IBS*

Major Publication

- *Lifetime measurement of (Lambda)C-12, (Lambda)Si-28, and (Lambda)Fe hypernuclei, Phys. Rev. Lett. 81 (1998) 4321*
- *Limits on WIMP-nucleon cross section with CsI(Tl) crystal detectors, Phys. Rev. Lett. 99 (2007) 091301*
- *Scintillator-based detectors for dark matter searches I, New J. Phys. 12 (2010) 075003*
- *Observation of reactor electron antineutrino disappearance in the RENO Experiment, Phys. Rev. Lett. 108 (2012) 191802*
- *New limits on interactions between weakly interacting massive particles and nucleons obtained with CsI(Tl) crystal detectors, Phys. Rev. Lett. 10 (2012) 181301*
- *Tests on NaI(Tl) crystals for WIMP search at the Yangyang Underground Laboratory, Astro. Part. Phys. 62 (2015) 249*

About Center

The goal of our research center is to gain a better understanding of the origin and structure of the Universe. In particular, we want to understand the characteristics of the mysterious "dark matter" that accounts for 80% of the Universe's mass, and the basic nature of the still poorly understood neutrinos. This requires experimental searches for processes that occur very rarely, such as interactions of dark matter particles with ordinary matter and decays of certain nuclei that involve two electrons but zero neutrinos. Since these processes, if they occur at all, are expected to be extremely rare, it is essential to develop large, hundred-kilogram-scale crystal detectors with extremely low contaminations of radioactive impurities, and operate them deep underground, where they are well shielded from naturally occurring cosmic radiation. At present we have two pilot experiments operating in a 700-meter-deep laboratory that is located under a mountain near YangYang, Korea. Since the purity levels that are required for our future experiments surpass those that have ever been achieved, we are actively developing new techniques for material purification and ultra-pure crystal growing.

Research Area

- *Discovery for dark matter and neutrinoless double beta decay*
- *Fundamental knowledge about the origin and structure of the universe*
- *Application to radiation, nuclear measurement, and medical technology through the research on the new detectors*

Faculty

Prof. Yong-Hamb Kim
yhk@ibs.re.kr
PhD, Brown University (2004)
Group Leader / Center of Underground Physics

Prof. Hyang-Kyu Park
hkpark@ibs.re.kr
PhD, Carnegie Mellon University (1998)
Research Fellow / Center of Underground Physics

ctpu.ibs.re.kr

Center for Theoretical Physics of the Universe

To explore the fundamental laws of the Universe

Director : Prof. Kiwoon Choi *kchoi@ibs.re.kr*

Prof. Kiwoon Choi was a professor in KAIST as a theoretical particle physicist. In 2007, he was named 'Science foundation- Thomson scientific Scientist' by 'Korea Science and Engineering Foundation' and 'Thomson Scientific'. In the same year, he was named 'National scholar' by 'Ministry of Education & Human Resource Development' and 'Korea Academic Promotion Foundation'. Also in 2011, he won the 'Korea Science Award' from 'Ministry of Science, ICT and Future Planning' and 'National Research Foundation of Korea'.

Education

BS, Seoul National University (1981)
PhD, Seoul National University (1986)

Major Experience

- *1986-1987 Visiting Postdoctoral Research Associate, Harvard University*
- *1987-1992 Postdoctoral Research Associate, Johns Hopkins University, Carnegie-Mellon University, UC at San Diego*
- *1992-1994 Research Professor, Chonbook National University*
- *1994-1996 Assistant Professor, KAIST*
- *1996-2001 Associate Professor, KAIST*
- *2001-2013 Full Professor, KAIST*
- *2013- Director, Center for Theoretical Physics of the Universe, IBS*

Major Publication

- *String theoretic QCD axions in the light of PLANCK and BICEP2, JHEP 1407 (2014) 092*
- *Higgs phenomenology in the Peccei-Quinn invariant NMSSM, JHEP 1401 (2014) 072*
- *Cosmological moduli problem in large volume scenario and thermal inflation, JCAP 1303 (2013) 011*
- *Higgs mixing and diphoton rate enhancement in NMSSM models, JHEP 1302 (2013) 090*
- *Peccei-Quinn NMSSM in the light of 125 GeV Higgs, JHEP 1211 (2012) 118*

About Center

The Standard Model of particle physics and General Relativity provide an accurate description of almost all known physical phenomena. But there exists evidences that the Standard Model is not the fundamental theory. The prime theme of our research is new physics beyond the Standard Model, which can provide answers to the questions which cannot be answered by the Standard Model.

Research Area

- *Theoretical study of particle physics and the early Universe*
- *Model building for new physics beyond the Standard Model of particle physics*
- *Collider physics and low energy rare processes predicted by new physics beyond the Standard Model*
- *Cosmology associated with dark matter, cosmic inflation, and exotic particles such as string moduli, axion, gravitinos*
- *Dynamical symmetry breaking and low energy hadron physics*
- *String phenomenology*

Faculty

Prof. Kenji Kadota
kadota@ibs.re.kr
PhD, University of California, Berkeley (2004)
Research Fellow / Center for Theoretical Physics of the Universe

pcs.ibs.re.kr

Center for Theoretical Physics of Complex Systems

From complexity to universality: Cross-fertilizing condensed matter, optics and nonlinear science

Director : Prof. Sergej Flach *sflach@ibs.re.kr*

Prof. Sergej Flach is a condensed matter theoretical physicist. He previously worked at the Max Planck Institute in Germany where he was an associate director and head of their visitors program for 18 years. He moved to New Zealand in 2012 to undertake a professorship in theoretical physics and complex systems at Massey University. Professor Flach is a world-renowned scholar in theoretical condensed-matter physics and is considered to be one of the top researchers in his areas of expertise in nonlinear and complex systems.

Education

MD, Technical University Dresden (1986)
PhD, Technical University Dresden (1989)

Major Experience

- *1992-1994 Researcher in Deutsche Forschungsgemeinschaft / Boston University*
- *1994-1997 Associate Position in Max Planck Institute for the Physics of Complex Systems*
- *1997-2012 Head of visitors program in Max Planck Institute for the Physics of Complex Systems*
- *2012- Professor in Massey University*
- *2014- Director, Center for Theoretical Physics of Complex Systems IBS*

Major Publication

- *Fano resonances in nanoscale structures, Rev.Mod.Phys 82 (2010) 2257*
- *Anderson Localization or NonlinearWaves: A Matter of Probability, Phys.Rev.Lett 107 (2011) 240602*
- *The weak-password problem: Chaos, criticality, and encrypted p-CAPTCHAs, Euro.Phys.Lett 95 (2011) 50007*
- *Flatbands under Correlated Perturbations, Phys.Rev.Lett 113 (2014) 236403*
- *Tunable transport with broken space-time symmetries, Phys.Rep 538 (2014) 77120*

About Center

Our center aims to take up the grand challenge and to create a world-class laboratory for the nonlinear classical and quantum dynamics of nano-structured systems, and to conduct cutting edge research on phenomena at the interfaces of applied and computational theoretical condensed matter physics and optics.

Research Area

- *The nonlinear classical and quantum dynamics of nano-structured systems*
- *To conduct cutting edge research on phenomena at the interfaces of applied and computational theoretical condensed matter physics and optics*
- *Cross-fertilize research on exciton-polariton condensates, superconducting networks, quantum dot networks, ultracold atomic gases, optical waveguide networks, topology frustration, flatband physics*

교수진

Prof. Gentaro Watanabe
gentaro@ibs.re.kr
PhD, University of Tokyo (2003)
Research Fellow / Center for Theoretical Physics of Complex Systems

Curriculum

< Course List >

Classification		Course Name	Credits	Professor	Term
Major Course	Indepth Elective	Genome Engineering	3	Sang-Gyu Kim Taeyoung Koo	Annual/Fall
		Nuclear and Particle Physics I	3	Yeongduk Kim	Annual/Spring
		Nuclear and Particle Physics II	3	Hyang-Kyu Park	Annual/Fall
		Particle Physics and Cosmology I	3	Kenji Kadota	Annual/Spring
		Particle Physics and Cosmology II	3	Kenji Kadota	Annual/Fall
		Nonlinear Matter and Light Waves	3	Sergej Flach	Annual/Spring
		Physics of Cold Atomic Gases	3	Gentaro Watanabe	Biennial/Spring
Field Research		Field Research on Cognitive Behavior Analysis I	4	Hee-Sup Shin	Biennial/Spring
		Field Research on Cognitive Behavior Analysis II	4	Hee-Sup Shin	Biennial/Fall
		Field Research on Cognitive Behavior Analysis III	4	Hee-Sup Shin	Biennial/Spring
		Field Research on Cognitive Behavior Analysis IV	4	Hee-Sup Shin	Biennial/Fall
		Cognitive Neuroscience Experiment I	2	Yee-Joon Kim	Biennial/Spring
		Cognitive Neuroscience Experiment II	2	Yee-Joon Kim	Biennial/Fall
		Cognitive Neuroscience Experiment III	2	Yee-Joon Kim	Biennial/Spring
		Cognitive Neuroscience Experiment IV	2	Yee-Joon Kim	Biennial/Fall
		Research on Genome Engineering I	2	Sang-Gyu Kim	Annual/Spring
		Research on Genome Engineering II	2	Sang-Gyu Kim	Annual/Fall
		Research on Astro-Particle Experiment I, II, III, IV	4	Yeongduk Kim Yong-Hamb Kim Hyang-Kyu Park	Annual/ Spring · Fall
		Research on Particle Physics and Cosmology I	2	Kenji Kadota	Annual/Spring
		Research on Particle Physics and Cosmology II	2	Kenji Kadota	Annual/Fall
Seminar		Neuroscience Seminar I	3	Hee-Sup Shin	Biennial/Spring
		Neuroscience Seminar II	3	Hee-Sup Shin	Biennial/Fall
		Neuroscience Seminar III	3	Hee-Sup Shin	Biennial/Spring
		Neuroscience Seminar IV	3	Hee-Sup Shin	Biennial/Fall
		Seminar on Genome Engineering I	3	Sang-Gyu Kim	Annual/Spring
		Seminar on Genome Engineering II	3	Sang-Gyu Kim	Annual/Fall
		Seminar for Astro-Particle Physics I	3	Yeongduk Kim Hyang-Kyu Park	Annual/Spring
		Seminar for Astro-Particle Physics II	3	Yeongduk Kim Hyang-Kyu Park	Annual/Fall
		Seminar on Particle Physics and Cosmology I	3	Kenji Kadota	Annual/Spring
		Seminar on Particle Physics and Cosmology II	3	Kenji Kadota	Annual/Fall

< Major Courses Introduction >

● Genome Engineering

Understanding of genome editing tools and an introduction to the recent application of genome engineering tools for molecular and cellular biology
• Professor : Sang-Gyu Kim, Taeyoung Koo

● Nuclear and Particle Physics I

This course covers the fundamentals of nuclear and particle physics with an emphasis on experimental methods and phenomenology. It consists of two parts: nuclear physics and particle physics. In nuclear physics, we will discuss mainly radioactive nuclear decays and nuclear reactions. In particle physics, we will discuss properties of elementary particles and interactions among them.
• Professor : Yeongduk Kim

● Nuclear and Particle Physics II

This course is the continuation of the Nuclear and Particle Physics I course. The aim of this course is for students to become familiar with research in the field of astro-particle physics. It will cover the standard model of particle physics, brief introductions of beyond standard models, neutrino physics, standard cosmology and finally dark matter and dark energy. During the course, we may invite experts as guest lecturers.
• Professor : Hyang-Kyu Park

● Particle Physics and Cosmology I

The aim of this lecture is to cover the basic concepts of particle physics and cosmology. We present theoretical foundations of the Standard Model of particle physics, which describes electroweak and strong interactions. The lecture also contains an discussion on what the fundamental problems of standard cosmology are and how they are resolved by cosmic inflation.
• Professor : Kenji Kadota

● Particle Physics and Cosmology II

This is an advanced course in particle physics and cosmology. We discuss various models for physics beyond the Standard Model of particle physics such as supersymmetry and grand unification. We also study inflation models and cosmological perturbation theory.
• Professor : Kenji Kadota

● Nonlinear Matter and Light Waves

This advanced course covers the fundamentals of wave dynamics in interacting ultracold atomic gases, exciton-polariton condensates, and light in structured media. We will first introduce the different physics settings, and arrive at a unifying description using interacting wave equations - both at the classical and quantum level. During the second part we will study the math of these wave equations, and obtain nonlinear excitations - discrete breathers, q-breathers, and their quantum analogues. The third part will cover the impact of external disorder including Anderson localization, Aubry-Andre-localization, Wannier-Stark localization, and dynamical localization.
• Professor : Sergej Flach

● Physics of Cold Atomic Gases

This course provides an introduction to the physics of cold atomic gases. The aim of this course is twofold: 1) To deliver basic knowledge in order to be able to conduct research in this field and 2) to provide important concepts in condensed matter physics in general. After an overview of this field, we will discuss atomic properties, Bose-Einstein condensation, superfluidity, optical lattices, and superfluid Fermi gases, etc.
• Professor : Gentaro Watanabe

Graduation Requirements

< Courses and Grading >

Classification of Credits		Evaluation	Required Credits	
			Doctoral Program	Integrative Program
Class Work	Common Course	(S/U) or Percentage	3	6
	Major Courses	Percentage	12	24
Research Work	Field Research	Percentage	12	24
	Seminar	(S/U)	2	4
Thesis Work		(S/U)	3	6
Total Credits			32	64

※ (S/U) : Satisfactory / Unsatisfactory
※ At least 2 credits should be acquired from lab rotation or internship for graduation.

< Paper Publication >

When a (or more) thesis of a student, as the first author, is printed in a world- famous journal, such as an SCI journal, or when the president recognizes, through deliberation by the University Committee, the thesis to be such a research achievement as to correspond to those published in internationally well-known journals.

< Comprehensive Examination >

A student's knowledge of fundamentals and expertise, and his/her application in a major field of study are assessed by a written or oral examination.

< Foreign Language Examination >

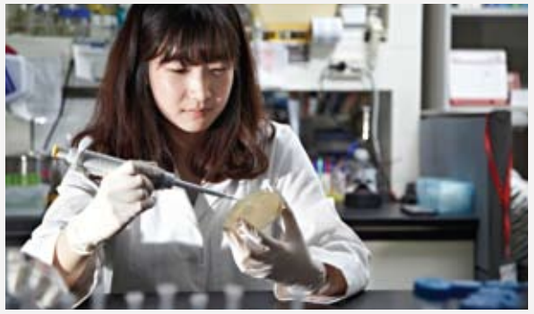
	TOEFL			TOEIC	TEPS	IELTS
	iBT	CBT	PBT			
Score	79	213	550	730	657	6

< Thesis >

Those who meet the requirements for degree conferral including the minimum credits and the comprehensive examination can ask the Thesis Examination Committee for examination of a degree thesis.

< Special Screening >

Above 2nd grade at TOPIK



Course Outline

< Common Courses >

Classification	Brief Exploration of Courses	Course Period	Courses Registration Period	Credits	Evaluation
Summer/ Winter School	Basic Science, refinement and convergence oriented lecture by professionals	3 nights and 4 days each semester	Designated period during the vacation	2	S/U (Satisfactory/ Unsatisfactory) or Percentage
Orientation for Incoming Students	Program to guide students as to UST academic rules and help students to adapt to new school lives, targeting incoming students every semester.	Before the semester begins	Designated period before the semester begins	1	
Korean Language Course	Learning Korean for foreign student	Whole semester		0	
Common Liberal Arts	Lectures on common theories of liberal arts			1	

※ Course schedules are subject to change every semester.

< Major Courses >

Courses Contents	Credit Authorization	Evaluation
Theory lectures on majors	More than 16 hours for 1 credit (3 credits for 1 course, 16 weeks)	Percentage

< Field Research >

Courses Contents	Credit Authorization	Evaluation
Consists mainly of experiments, practical and theoretical lectures that are related to the study assignments of students	2 credits per 8 weeks / 4 credits per 12 weeks, can be applied up to 6 credits per semester	Percentage

Division	Professor	Documents for Submission	Note
Advisor	Advisor, Common advisor	Field Research Report	–
Other labs	UST professor except advisor and common advisor		Choose one. More than 2credits are required.
External institute	Other university and company or other research center		

※ When signing up for afield research class, it should be decided whether a lecturer and an academic advisor (including co-advisor) are appropriate or not. Then, it is classified into the field research of the academic advisor and the field research of another laboratory.
※ After the end of the course, students must submit field research report on time. If not, credits cannot be authorized.

< Seminar >

Courses Contents	Credit Authorization	Evaluation
· Participation in workshops on technology, presentation of research achievements or seminars in or out of the school. · Presentation and discussion by a student on research achievements. · Attendance at more than 8, presentation at more than 1.	3 credits for a course	(S/U)

< Thesis Work >

Courses Contents	Credit Authorization	Evaluation
Thesis Work	3 credits for a course	(S/U)

※ Only one course is avaliable for a semester.

Campus Life

< Support >

Scholarship

- *All students are provided with a monthly stipend to encourage them to focus on research and study*
- *Scholarships by Program*

Course	Tuition	Stipend
PhD Program	fully funded	KRW 2 million won/ month
Integrative Program		KRW 1.5 million won/ month

※ *UST standard : Master's Course - Minimum of 1.2 million won/month, Doctor's Course - Minimum of 1.2 million won/month (from March 2013)*
※ *Integrative program students will be payed same as doctor's course students from the third-year.*

< Student Welfare >

- Medical Check-up
- Comprehensive Insurance
- Psychology Consultation
- Dormitory

< University Awards >

- Thesis Prize
- Excellent Faculty Prize
- Excellent Lecture Prize
- UST Excellent Research Thesis Supervisor Prize

Exchange Programs

< Student Support Program >

- *Overseas Training Program*
  - *UST supports outstanding students who attend the internship or co-work in renowned overseas university or research institutes*
- *Overseas Exchange Program*
  - *Overseas Academic Exchange Program : UST supports outstanding students who present their papers in international conference*
  - *Overseas Educational Trend Survey Program : UST assists outstanding students to visit and experience advanced education system in renowned overseas university or research institutes*

< Academic Exchange Program >

- *Students can take courses in other universities and institutions signed exchange agreement*
- *About 30 universities signed for exchange agreement. (SNU, KAIST, Yonsei Univ., Korea Univ., etc.)*
- *Avaliable courses*
  - *Graduate school courses allowed for exchange by the university*
- *Approvable Credits (can be varied by university rules)*
  - *Korea Univ. : Less than 3 credits for each semester*
  - *KAIST : Less the 6 credits for each semester*
  - *Other universities : No limit*

Admission Guide

< Admission Schedule >

Semester	Admission Period
Spring Semester Admission (Admission in March)	Every year around September
Fall Semester Admission (Admission in September)	Every year around March

※ Check the admission guide for details.

< Eligibility >

• Eligibility for Special Admission

Foreigners — A person who and whose parents are foreigners and do not have Korean citizenship

Koreans Living Overseas — A person who is a child of overseas Koreans and has attended academic programs there for 16 years or more

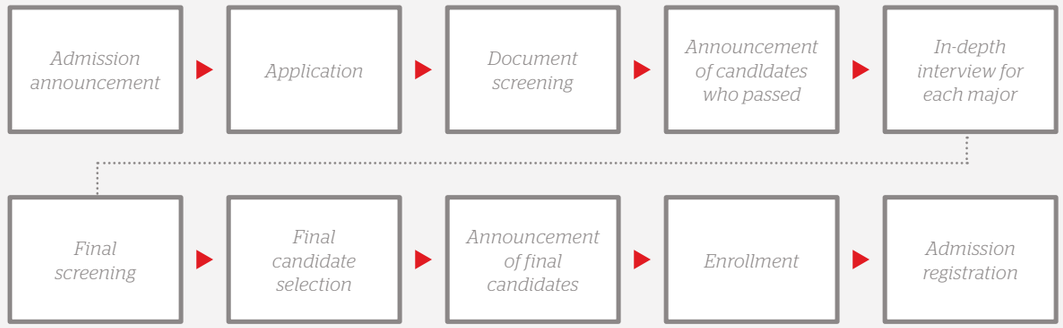
• Required Qualifications for Degree Programs

Degree Program	Qualifications
Doctoral Program	· A person who has earned a master's degree or expects to receive a master's degree · A person who has credentials similar to or higher than the above in accordance with the relevant laws and decrees
Integrative Program	· A person who has earned a bachelor's degree or expects to receive a bachelor's degree · A person who has credentials similar to or higher than the above in accordance with the relevant laws and decrees

※ **What is an integrative program?**

- An integrative program is defined as a graduate program in which students can obtain a doctoral degree
- Those who are admitted through this program should pass a qualification examination for their doctoral program
- Only a master's degree is conferred on those who have met the requirements of the master's degree; if they guit during the program.

Application Procedure



- 1st phase (document screening) : GPA, achievement, research experience, and comprehensive evaluation of fundamental scholastic ability in each field of study, based on studies and research plan.
- 2nd phase (in-depth interview) : Overall screening will be conducted in terms of the applicants' capability of completing the degree program, enthusiasm for study and research, potential of scientific experiments and academic communications.

Official English Score

• Minimum Score Standard

Division	TOEFL			TOEIC	TEPS	IELTS
	iBT	CBT	PBT			
Score	79	213	550	730	657	6

※ The TOEIC score is the sum of the Listening & Reading score (TOEIC Speaking is not avaliable).

※ The test date should be issued within 2 years of the date of application.

※ Authenticity of Official English Score : IBS School, UST will verify official English score through the corresponding testing organizations (If any falsified official English score is found, the corresponding application is considered invalid, the admission is cancelled or the applicant is not allowed to apply for the university for the next five years.).

※ Check more detailed exceptions and precautions on the website.

UST Admissions website

admission.ust.ac.kr

Meet Our Students

Autonomy in research made me to choose IBS School.

Seonghyeok Ye
The 1st Student of IBS School

During my internship at the IBS Center for Genome Engineering, I had the opportunity to participate in innovative research projects conducted at the Center and learn the processes involved in those projects. IBS cultivates a research environment where outstanding researchers from different fields are allowed maximum autonomy in conducting their research. Each researcher can focus on their own research interests. This is the reason I want to be part of IBS so that I can explore research themes that interest me in the best research environment.

I have always believed in the power of basic science, and seeing this effect of genome engineering on society gave me confidence in my career as a researcher. I hope that one day the outcomes of basic science bring a paradigm shift and eventually overcome the boundaries of academic disciplines, thereby ushering in a new era throughout society. To realize these goals, I choose to study at IBS School.

I will be a researcher that realize the IBS School's vision with other various fields' researchers.

Taegeun Bae
The 1st Student of IBS School

The primary reason I chose to study at IBS School is that I can work with researchers from various fields within one research center. I started interning in March at the IBS Center for Genome Engineering. I spent several months with experts in different fields such as plants, animals, stem cells and viruses. They were all gathered in one Center conducting collaborative and interdisciplinary research that went beyond the boundaries of academic disciplines. After seeing the diversity and expertise at the Center, I became even more eager to join IBS School.

I hope to undertake creative research through collaborations with other researchers who have broad perspectives and expertise in their own respective fields. Above all, during my time at IBS School, I hope to pursue the IBS vision of "Making Discoveries for Humanity and Society" and become a leading researcher who realizes that vision.

The future is already here. It's just not evenly distributed yet.

-William Gibson

Spring semester 2016

Admission Guide

For Special Admission :
Foreigners, Koreans Living Overseas

Contents

Click Press the button to go to the corresponding.

Inquiry

Related with admission application	Related with admission online system
· Student Affairs Team · Hotline : +82-42-865-2334, 2335 · E-mail : F_adm@ust.ac.kr	· Smart University Team · Hotline : +82-42-865-2383 · E-mail : pegasusiz@ust.ac.kr

Ⅰ. Eligibility

UST way of education is based on a self-driven learnig system which allows students to actively engage in defining issues from field studies and solving them, not on a superficial theoretical knowledge transfer. We strongly encourage to apply UST in accordance with relevant application procedure to all enthusiastic&ingenious scientists who want to unfold their dreams within the educational philosophy of UST.

1. Eligibility of Special Admission

Foreigners
Must not have held Korean Citizenship, and whose parents are not citizens of Korea

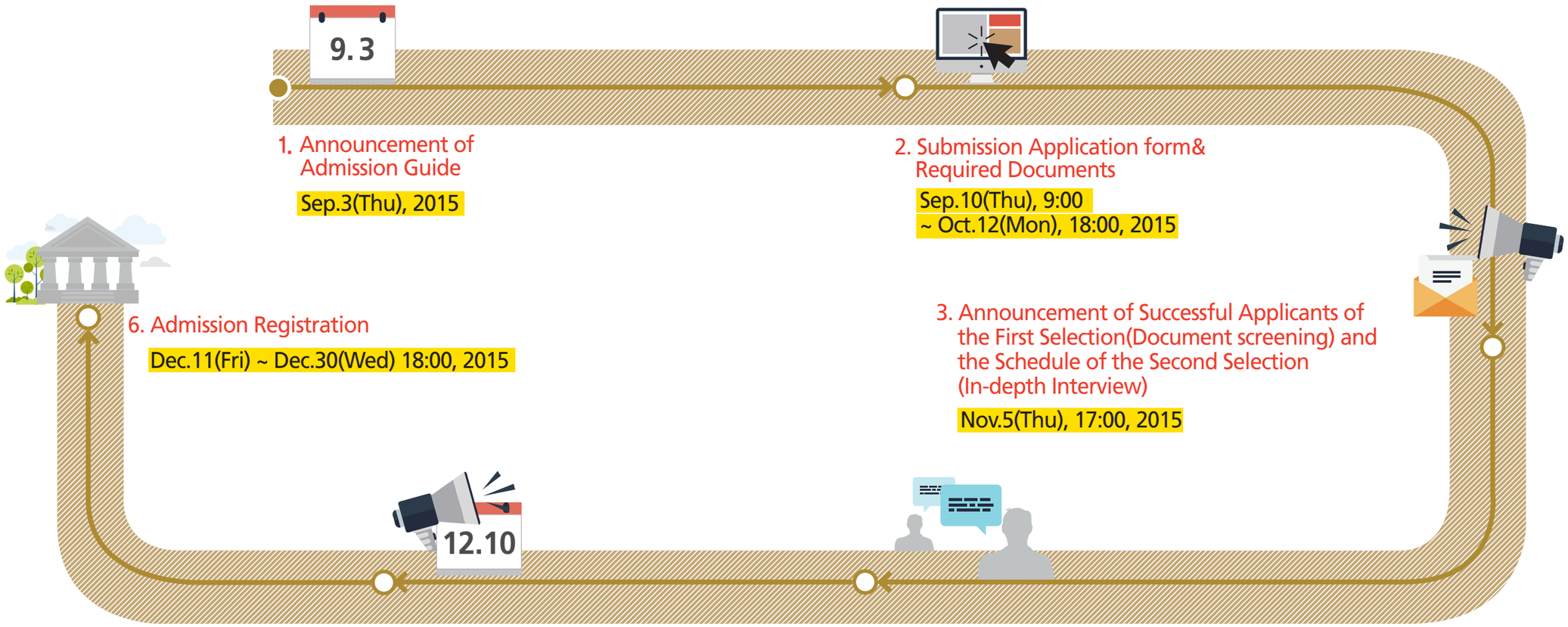
Koreans Living Overseas
Must have received his/her entire elementary · junnior high · high school and undergraduate education outside of Korea

2. Specific Qualification for degree program

Degree Program	Qualification
Doctoral Program	Those who have a master's degree or are expected to get one by Feb. 2016
	Those who are recognized as having qualifications equivalent to a master's degree or approved by law
Integrative Program, Master's Program	Those who have a bachelor's degree or are expected to get one by Feb. 2016
	Those who are recognized as having qualifications equivalent to a bachelor's degree or approved by law

· What is an integrative program?
- An integrative program is defined as a graduate program in which students can obtain a doctoral degree
- Those who are admitted through this program should pass a qualification examination for their doctoral program
- Only a master's degree is conferred on those who have met the requirements of the master's degree; if they quit during the program

Ⅱ. Application Schedule



1. Announcement of Admission Guide

Sep.3(Thu), 2015

2. Submission Application form& Required Documents

Sep.10(Thu), 9:00
~ Oct.12(Mon), 18:00, 2015

3. Announcement of Successful Applicants of the First Selection(Document screening) and the Schedule of the Second Selection (In-depth Interview)

Nov.5(Thu), 17:00, 2015

4. the Second Selection(In-depth Interview) in each field of study

Nov.16(Mon) ~ Nov.19(Thu), 2015

5. Announcement of Final Successful Applicants

Dec.10(Thu), 17:00, 2015

6. Admission Registration

Dec.11(Fri) ~ Dec.30(Wed) 18:00, 2015

※ Detailed procedures may be subject to change and will be announced on the UST homepage (www.ust.ac.kr)

Ⅰ. Application Procedure

Click Press the button to go to the corresponding.

1. Submission Application Form and Required Documents

10.12

Sep. 10.(Thu), 9:00 ~ Oct. 12.(Mon), 18:00, 2015

1 Access to the Admission online system

Access to the http://apply.ust.ac.kr Click

2 Fill out the Application form

- One account for one person
- As for "Campus," "Major" and "Degree Program," please select one each. (Double application is not allowed)/ If double application cases are found, the corresponding applications will be considered invalid or cancelled.
- ※ If you are found to have provided false information, it will result in cancellation of admission.
- After filling out all required information according to the online instructions, please save.

3 Submission Required Documents (Upload)

- **List of Requird Document** Click — Applicants are required to submit all the documents which are specified in the admission guide.
- **How to Submit Documents** — Please upload the files in the admission online system. Only JPG, PDF, HWP, MS-WORD files are allowed. The files should be less than 5MB
- After uploading all the required documents according to the online instructions, please save.

4 Completion Application

- Only after ① filling out an application form and ② submitting all required documents, your application process has been completed.
- Complete submission — **Completion of Application Process** — You can complete the application process by confirming the information you entered and the files you uploaded.
- **Confirming the information you entered** — It is impossible to modify the information entered after the application period has ended.

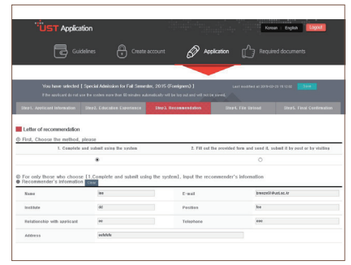
5 Output

- After completing the application process, applicants can print out an "Application form" and "Test identification slip."
- Applicants who passed the first-selection should bring the "test identification slip" on the day for the second-selection.

※ Explanation of submission a letter of recommendation in detail

1. Input the recommender's information

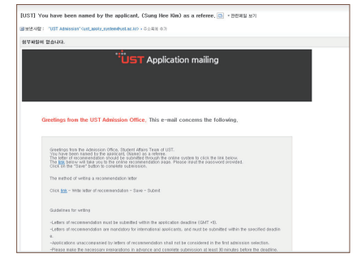
Who do	Admission applicants
Where	Admission online system (http://apply.ust.ac.kr)



2. Announcement to write a letter of recommendation for recommenders

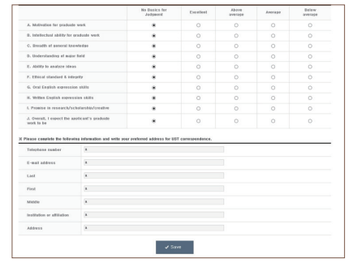
Qualifications of recommender : Professor at Universities or Head of department at work places
- Professor must belong to the university where the applicant graduated(or expect to graduate).
- Head of the department must belong to the office where applicant is working currently(or had worked previously)

Way	Recommender can send a letter of recommendation via e-mail. (Please check the URL for letter of recommendation and instructions on how to write a letter of recommendation). ※Please note that sending a letter of recommendation through the admission system is allowed only once.



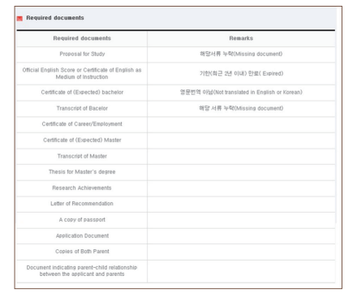
3. Writing the letter of recommendation

Period	The period of submission a letter of recommendation Sep. 10.(Thu) ~ Oct. 12.(Mon) (should be arrived within this period)
How to write	Recommender writes the letter of recommendation according to the e-mail from UST (Confirmation e-mail will be sent to the recommender after completing the letter of recommendation)



4. Applicants can check whether the letter of recommendation has been submitted

How to check	Through the admission online system (http://apply.ust.ac.kr)



I. Application Procedure

Click Press the button to go to the corresponding.

2. List of Required Documents

Proposal for Study
- Fill out the prescribed form Click
- Upload to Admission online system

Official English Score
- Recognition Minimum Score Standard obtained only in a specified period of time Click
- Waiver of submission do not need to submit Click
- Original documents may be required to confirm, if the copy is submitted

Certificate of (Expected) Master's degree
- Submit proof of enrollment if a certificate of an expected Master's degree is not available

Transcript of Master's program
- Grades must be indicated by a percentage grade. However, please note that exceptions are recognized for the (expected) graduates of foreign universities
- Transfer students are required to submit all the transcripts covering the period before and after transferring

Certificate of (Expected) Bachelor's degree
- Submit proof of enrollment if a certificate of an expected bachelor's degree is not available

Transcript of Bachelor's Program
- Grades must be indicated by a percentage grade. However, please note that exceptions are recognized for the (expected) graduates of foreign universities
- Transfer students are required to submit all the transcripts covering the period before and after transferring

Thesis for Master's degree
- Only titles of papers and abstracts should be submitted
- If you are allowed to obtain a degree without writing a thesis pursuant to the university regulations or others, you should submit pertinent documentation

Research Achievements
- Publications includes published papers, papers presented at academic conferences, and intellectual property (if available)
- Applicants should submit a list of publications and a copy of each
  - Publications : should provide information about the author, summary, or abstract
  - Technical report : should provide information about abstracts and summaries

Certificate of Career/ Employment (if applicable)
- Fill out the prescribed form Click
- Upload the form and related certificates to Admission online system

List of additional required documents in accordance with the applicant type
- **Foreigners**
  Letter of Recommendation

Each 1

Only for applicant for doctoral program

All applicants Common

※ Additional documents may be required to confirm status of Foreigners, Koreans Living Overseas
※ If all required documents would not be submitted, then will be considered to fail at the formal examination in the first selection(Document screening)
※ Applicants for the integrative program should submit the same documents as applicants for the master program
※ All application documents should be written in Korean or English. Documents not written in English or Korean must be accompanied by certified translations (or documents notarized at embassy)

Ⅰ. Application Procedure

3. Official English Score

Minimum Score Standard

Type	TOEFL			TOEIC	TEPS	IELTS
	iBT	CBT	PBT			
Score	79	213	550	730	657	6

※ The TOEIC score is the sum of the Listening & Reading score

※ **The test date should be issued within 2 years of the date of application (Oct.13, 2013 ~ Oct.12, 2015)**

Excep-tion

Waiver from submission of official English Score

1. Applicants who obtained a bachelor's degree or higher with more than 1 year of study in the English speaking countries, such as the U. S., U.K, Canada, Australia, New Zealand, Ireland, or the Republic South Africa

2. UST(Expected) graduate

Authenticity of Official English Score

: UST check the authenticity of official English score through the corresponding testing organizations. (If any falsified official English score is found, the corresponding application is considered invalid, the admission is cancelled or the applicant is not allowed to apply for the university for the next five years.)

Excep-tion

Deferred submission of official English scores for the admission application

-The permit conditions

: You are not required to providean official English score if you have obtained degree at a university (graduate school) in the UST-designated English speaking countries (a total of 31 countries) and have proven that all the courses you have completed were taught inEnglish.

- The UST designated countries

:Ghana, Guyana, Republic of Gambia, Nigeria, Liberia, Lesotho, Rwanda, Malawi, Republic of the Union of Myanmar, Vanuatu, Belize, Bhutan, Solomon is, Sudan, Sri Lanka, Swaziland, Sierra Leone, Eritrea, Ethiopia, Uganda, Zambia, Zimbabwe, Cameroon, Cambodia, Kenya, Kiribati, Tanzania, Tonga, Papua New Guinea, Fiji, Philippines

-The way to be deferred

: You are required to submit a 'Certificate of English as Medium Instruction' Click stating that English was the language of teaching on your course instead of an official English score. (Please use UST's prescribed form.)

-The period of grace

: You are eligible to postpone submission of an official English score meeting the minimum requirement until the period for the submission of degree thesis provided in Article 16 of the Regulations on Degree Conferment.

4. Procedures of the First Selection and the Second Selection

First Selection (Document screening) ①

- Check the contents of the admission application (Including submission all required documents, satisfaction of minimum required official English score, etc.)
- Applicant's competence will be evaluated based on the documents that applicants submit including transcripts of undergraduate and graduate programs, and study proposals

11.5

- Announcement of Successful Applicants of the 1st selection (Document screening) and the schedule of the second selection (In-depth Interview)
  : Nov.5(Thu), 17:00, 2015
- Method : Check the admission online system Click

Second Selection (In-depth Interview) ②

- Evaluation by in-depth interview in each field of study: Overall screening will be conducted in terms of the applicants' capability of completing the degree program, enthusiasm for study and research, potential of scientific experiments and academic communications

- Date
  : Nov.16(Mon) ~ Nov.19(Thu), 2015[Expected]
- Applicants are required to bring their ID card & the test identification slip for the interview

Announcement of Final Successful Applicants ③

- Date : Dec.10(Thu) 17:00, 2015
- Method : Check the admission online system Click

Admission Registration for Final Successful Applicants ④

12.11 ~ 12.30

- Date
  : Dec. 11(Fri) ~ Dec. 30(Wed) 18:00, 2015

- Enrollment Information
  Announcement UST Homepage

- Submission of admission registation doument
- Registration Fee
  : KRW 180,000 (Payment in February)

Admission will be canceled for anyone who fails to register during the designated period

Ⅱ. Important Notes

1. Completion of an Application form

Fill out an accurate e-mail address during online application, **as important announcements will be made via e-mail.** UST will not take responsibility for disadvantages that may occur from inaccurate information

All applicants need to be aware that by submitting your applications, you are agreeing to that the personal information you provided will be processed in accordance with the relevant university rules. Collected personal information will be used to create the school register of the successful applicants.

2. The Submission of Required Documents

Disadvantage that arises when the contents of the Submitted documents(uploaded files) cannot be confirmed is the responsibility of the applicant.

All application documents should be written in Korean or English.
Documents not written in English or Korean must be accompanied by certified translations
(or documents notarized at embassy)

Falsified or forged documents are found, this will lead to admission application rejection for the following five years and a failure an admission

Student who deferred submission of official English scores for admission application
- should submit one of the official English score described article 16 in the UST policy for degree conferral within the designated period for degree conferral

3. Selection

Even if the number of applicants fails to meet the enrollment goal, no offers will be made if all applicants are deemed unqualified.

4. UST Education

UST makes it a rule to study as a full-time student
(from 9 A.M. to 6 P.M., Monday through Friday)

5. Submission list of additional documents for final successful applicants

Successful applicants are required to submit the original copies of the following documents to register officially.(applicants must attached the Apostille certificate or a Consular confirmations.)

All applicants common
- Certificate of (expected) bachelor's degree
- Transcript of bachelor's program
- Certificate of (expected) master's degree(doctoral applicants only)
- Transcript of master's program(doctoral applicants only)

Koreans Living overseas
- Graduation certificate of elementary, junior high, high school
- Certificate of Entry / Exit

Successful applicants are required to submit the copies of the following documents to register officially.

Foreigners
- A copy of applicant's passport(only passport)
- Copies of both parents' passports or ID card(If they are unavailable, you can replace it with other official documents indicating parents' nationality)
- Applicants' birth certificate or family register proving the parent-child relationship (Official document indicating parent-child relationship between the applicant and parents)

※ 'Copies of both parents' passports or ID card' can be replaced to applicants' birth certificate or family register which proves parents' nationality.

Students expecting graduation must submit proof of graduation and academic transcripts(including date of degree conferral or degree registration number) by the deadline below. **The offer of admission may be withdrawn otherwise.**
- Submission Period : by Mar.10(Thu), 2016

Additional Documents for Submission by final successful applicants in accordance with the 'Apostille Convention', for those applicants who graduated from universities out of Korea

- Document to be issued with an 'Apostille certificate' on
: Certificate of degree for Bachelor's (and Master's for doctoralprogram applicants), Academic transcript for Bachelor's(and Master's for doctoral program applicants)
– Submission Period : by Mar.10(Thu), 2016
– Place of Issue : Authorities designated by your government

Apostille Convention?
An international treaty that facilitates mutual certification of official documents between state parties by recognizing legalization in the country of issue without complex authentication procedures

※ Applicants who've graduated from UST and had submitted Apostille Certificate before do not need to submit the same ones

※ Refer to [www.hcch.net] for information on authorities per country

※ All documents submitted should be written in Korean or English. For languages other than Korean or English, Please submit along with notarized translations**(a Consular Confirmations)** of the original documents

※ The apostille certificate can be replaced with and 'a Consular Confirmations'. (If the country is not a member of 'Apostille convention', etc.)
-Place of Issue
· Korean embassy or consulate in your country
· Embassy or consulate of your country in korea

Successful applicants(who applied for Koreans Living overseas) are required to submit the original copies of the Graduation certificate of elementary, junior high and high school. (applicants must attach the Apostille certificate or a Consular confirmations.) **until Mar.10(Thu), 2016**

List of Campus and Major

Click Press the button to go to the corresponding.

Foreigners/Korean Living overseas

Click : Searching for the detail information of Campus & Major

Campus	Major
Click National Fusion Research Institute	Click Accelerator and nuclear fusion physical engineering
Click Agency for Defense Development	Click Weapon Systems Engineering
Click Korea Polar Research Institute	Click Polar Science
Click Institute for Basic Science	Click Accelerator and nuclear fusion physical engineering Click Science and Technology Management Policy Click Basic Science Click Nano Science Click Nanobiotechnology and Bioinformatics Click Nanomaterials Science and Engineering Click Bio-Analytical Science Click Biomolecular Science Click Neuroscience Click Green Chemistry and Environmental Biotechnology
Click University of Science and Technology(UST)	Click Science and Technology Management Policy
Click Korea Research Instiitute of Ships & Ocean Engineering	Click Ship and Ocean Engineering
Click Korea Institute of Toxicology	Click Human and Environmental Toxicology
Click Korea Institute of Materials Science	Click Advanced Materials Engineering
Click Korea Institute of Civil Engineering and Building Technology	Click Construction Environment Engineering Click Transportation and Logistics System & ITS Engineering Click Geotechnical & Geo-Space Engineering
Click Korea Institute of Science & Technology	Click HCI & Robotics Click Accelerator and nuclear fusion physical engineering Click Science and Technology Management Policy Click Nanomaterials Science and Engineering Click Biological Chemistry Click Neuroscience Click Energy and Environmental Engineering Click Biomedical Engineering Click Human and Environmental Toxicology Click Green Process and System Engineering Click Clean Energy and Chemical Engineering
Click Korea Institute of Science & Technology Information	Click Science and Technology Management Policy Click S&T Information Science Click Big Data Science

List of Campus and Major

Click Press the button to go to the corresponding.

Foreigners/Korean Living overseas

Click : Searching for the detail information of Campus & Major

Campus	Major
Click KIMM Korea Institute of Machinery & Materials	Click Nano-Mechatronics
	Click Nanobiotechnology and Bioinformatics
	Click Ship and Ocean Engineering
	Click Plant System and Machinery
	Click Environment & Energy Mechanical Engineering
Click KBSI Korea Basic Science Institute	Click Functional Genomics
	Click Nano Science
	Click Nano-Mechatronics
	Click Nanobiotechnology and Bioinformatics
	Click Bio-Analytical Science
	Click Green Chemistry and Environmental Biotechnology
	Click Marine Biotechnology
	Click Chemical Convergence Materials
Click KRIBB Korea Research Institute of Bioscience & Biotechnology	Click Functional Genomics
	Click Nanobiotechnology and Bioinformatics
	Click Bioprocess Engineering
	Click Bio-Analytical Science
	Click Biomolecular Science
	Click Biosystems & Bioengineering
	Click Human and Environmental Toxicology
	Click Green Chemistry and Environmental Biotechnology
Click KITECH Korea Institute of Industrial Technology	Click Nanobiotechnology and Bioinformatics
	Click Robotics and Virtual Engineering
	Click Advanced Energy and Technology
	Click Green Process and System Engineering
	Click Critical Materials and Semiconductor Packaging Engineering

Campus	Major
Click kfri Korea Food Research Institute	Click Science and Technology Management Policy
	Click Food Biotechnology
Click KIER Korea Institute of Energy Research	Click Advanced Energy and Technology
	Click Renewable Energy Engineering
Click KAER Korea Atomic Energy Research Institute	Click Accelerator and nuclear fusion physical engineering
	Click Radiation Biotechnology and Applied Radioiostope Science
	Click Radiochemistry & Nuclear Nonproliferation
	Click Advanced Nuclear System Engineering
	Click Quantum Energy Chemical Engineering
Click KIRAMS Korea Institute of Radiological & Medical Sciences	Click Rodiological & Medico-Oncological Sciences
Click Korea Electrotechnology Research Institute	Click Energy and Power Conversion Engineering
	Click Electrical Functionality Material Engineering

List of Campus and Major

Click Press the button to go to the corresponding.

Foreigners/Korean Living overseas

Click : Searching for the detail information of Campus & Major

Campus	Major
Click ETRI Electronics and Telecommunications Research Institute	Click Science and Technology Management Policy
	Click Nanobiotechnology and Bioinformatics
	Click Mobile communication & Digital Broadcasting Engineering
	Click Information Security Engineering
	Click Information and Communication Network Technology
	Click Advanced Device Technology
	Click Computer Software
Click KIGAM Korea Institute of Geoscience & Mineral Resources	Click Accelerator and nuclear fusion physical engineering
	Click Mineral & Groundwater Resources
	Click Nanomaterials Science and Engineering
	Click Geophysical Exploration
	Click Radiochemistry & Nuclear Nonproliferation
	Click Petroleum Resources Technology
	Click Resources Recycling
Click KASI Korea Astronomy & Space Science Institute	Click Science and Technology Management Policy
	Click Astronomy and Space Science
Click KRRI Korea Railroad Research Institute	Click Transportation and Logistics System & ITS Engineering
	Click Robotics and Virtual Engineering
	Click Railway System Engineering
Click Institut Pasteur Institut Pasteur Korea	Click Biological Chemistry

Campus	Major
Click KRISS Korea Research Institute of Standards and Science	Click Nano Science
	Click Nanomaterials Science and Engineering
	Click Weapon Systems Engineering
	Click Bio-Analytical Science
	Click Medical Physics
	Click Advanced Device Technology
	Click Science of Measurement
	Click Aerospace System Engineering
Click KIOM Korea Institute of Oriental Medicine	Click Big Data Science
	Click Korean Medicine Life Science
Click KARI Korea Aerospace Research Institute	Click Aerospace System Engineering
Click KIOST Korea Institute Of Ocean Science & Technology	Click Marine Environmental Science
	Click Marine Biotechnology
	Click Marine Biology
	Click Integrated Ocean Sciences
Click KRICT Korea Research Institute of Chemical Technology	Click Science and Technology Management Policy
	Click Medicinal Chemistry and Pharmacology
	Click Green Chemistry and Environmental Biotechnology
	Click Chemical Convergence Materials

Scholarship and Benefits

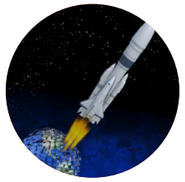
Highest standards of scholarship benefits

・Supported by monthly stipend

Doctoral Program	Master Program
Minimum of KRW 1,600,000 per month	Minimum of KRW 1,200,000 per month

※UST students are supported by monthly stipend as a research scholar participating in the research at the government-funded research institutes
※Additional allowance may be provided depending on campus budget
- Other scholarship and welfare benefits
- A dormitory room is provided for each student.
(availability limited in some campuses)

Participation in national projects involving world -class research facilities



Classification	Contents
Major research facilities	・RV Araon, King Sejong Station(KOPRI) ・Naro (KSLV-1), Naro Space Center(KARI) ・SMART nuclear reactor, Hanaro nuclear reactor(KAERI) ・KSTAR, ITER international joint development project(NFRI) ・National Primate Research Center, Korean Bioinformation Center(KRIBB) ・International joint development of 25m Giant Magellan Telescope(KASI) ・Possession of world-class equipment including the super computing center(KISTI)

Other Benefits for Outstanding Students

・Overseas Training Program
- UST supports outstanding students who attend the internship or co-work in renowned overseas university or research institutes

・Overseas Exchange Program
- Overseas Academic Exchange : UST supports outstanding students who present their papers in international conference
- Overseas Trend Survey: UST assists outstanding students to visit and experience advanced education system in renowned overseas university or research institutes

・UST Research Paper Award
- Outstanding research achievements for the journal, conference, patents, the others

Student Welfare

・All students are provided welfare as below
- General insurance covering medical expenses, etc
- The regular health check-up
- Online or face-to-face counseling
- e-Library : Rental service for the e-book, Web DB, etc
- Tablet(i-Pad) rental service

Advanced Education System

・New major can be adjusted each semester
- a timely and flexible response to rapid changes in the field of science and technology through the adjustment of majors

・Application fee and thesis examination fee are abolished to provide equal opportunity for more educational consumers

・Introducing instruction real-name system
- Instructor's name and campus will be provided on transcripts to encourage their recognition of teaching responsibility

Agreement for Academic Exchange with Prestigious Universities in Korea (36 universities in total)

・Kangwon National University Graduate School, Konkuk University Graduate School, Korea University Graduate School, Korea University Green School, Gwangju Institute of Science and Technology, Sogang University Graduate School, Ajou University Graduate School, Yonsei University Graduate School, Changwon National University Graduate School, Chungnam National University Graduate School, Korea Advanced Institute of Science and Technology, Hanyang University Graduate School, Korea Aerospace University Graduate School, University of Seoul Graduate School, Seoul National University, Chungbuk National University, Korea Maritime University, Pusan National University, Yeungnam University, Chonbuk National University, Dong-A University, Jeju National University, Chonnam National University, Kyungpook National University, DGIST, UNIST, Hannam University, Incheon National University, Seoul National University of Science and Technology, Ewha womans University, Inje University, Hanbat National University, Konyang University, Keimyung University, Hallym University, Kwangwoon University