[KRICT] Study Proposal of International Admission for 2021 Fall Semester

No.	Major	Sub-Major	Research Group (Team)	Research Project	Study and Research Proposal
1	Medicinal Chemistry & Pharmacology	Medicinal Chemistry	Therapeutics & Biotechnology Division	- Develpment of new drug candidates for existing medical unmet needs in cancers and metabolic diseases. - Development of innovative antivirals and antibiotics	Medicinal chemistry is an interdisciplinary science from synthetic organic chemistry, pharmacology, and computational chemistry. Medicinal chemistry activity includes design, chemical synthesis, and structure-activity-relationship (SAR) analysis toward bio-active small molecules. As an entry level medicinal chemist, students are trained with strong synthetic organic chemistry, instrumental analysis, and problem-solving for optimization.
2		Pharmacology	Therapeutics & Biotechnology Division	- Development of drug discovery platform technologies based on 3D cells/organoids. - Development of technologies to increase biological efficiency. - Development on treatment of customized rare diseases connecting clinical medicine.	Development of next generation bio- technologies for target discovery, target validation and drug evaluation studies. - Identification and validation technology for drug targets in first-in-class - Development of novel technologies for in vitro/in vivo drug evaluation and mode of action studies - Development of platform technologies for global new drug - Development of platform technology for bio-crop protectants and study of antimicrobial activity mechanisms
3	Advanced Materials & Chemical Engineering	Advanced Materials	Advanced Materials Division	- Development of advanced materials for next-generation lithium secondary battery - Development of fluorine-based core materials for semiconductor and display manufacturing processes - A study on the Convergence Materials for Photo/electric convergence devices)	Advanced materials is an interdisciplinary specialty area that focuses on potential applications and fundamental properties of functional materials based on chemistry. Our program of teaching and research in this specialty area spans not only the breadth of chemistry including the design, synthesis and characterization but also fundamental physics, process, and simulation of the chemistry convergence materials. Cutting-edge interdisciplinary research of our sub-department provide our graduate students with the foundation and creativity needed for leading the innovation of high performance materials in response to challenges in the area of information and electronics, green energy, and biotechnology convergence materials.
4		Green Chemical	Chemical & Process Technology Division)/Department of Bio-based Chemistry	- Green chemistry and Chemical Process Technology - Development of eco-friendly process for value-up of underutilized chemical resources - Bioplastics Manufacturing Technology for Waste Reduction	Chemical engineering (CE) is a multidisciplinary research areas based on chemistry, physics and biology that can get a clue for global sustainability. Especially, our department focus research on Carbon Capture Storage Utilization for Green Industry, Greenhouse (CO2) Gas Reduction, and sustainable Bio-based Chemistry for Eco-friendly Process, which are necessary to restore and conserve ecosystems on earth.