

[KRICT] Study Proposal of International Admission for 2020 Fall Semester

No.	Major	Sub–Major	Research Group (Team)	Study and Research Proposal
1	Medicinal Chemistry and Pharmacology	Medicinal Chemistry	Therapeutics & Biotechnology Division	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	<p>Development of next generation biotechnologies for target discovery, target validation and drug evaluation studies.</p> <ul style="list-style-type: none"> – 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

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3	Advanced Materials and Chemical Engineering	Advanced Materials	Advanced Materials Division	<p>– 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.</p>
4		Green Chemical	Advanced Materials Division / Bio-based Chemistry Research Center	<p>– 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.</p>