

NCS-Based KAIST Job Description – Research position

Recruitment area	Research position	Classification system	Parent category	Sub-category	Sub sub-category	Sub sub-sub-category
			16. Material	02. Ceramic materials	01. Fine ceramic manufacturing	01. Electrical and electronic material manufacturing
			15. Mechanical	01. Mechanical design	01. Mechanical design	03. Structural Analysis Design
Mission	<ul style="list-style-type: none"> ○ Korea Advanced Institute of Science and Technology (KAIST) Act <ul style="list-style-type: none"> - Educating outstanding talent proficient in theory and practice as required in the fields of science and technology for industrial development - Carrying out the nation's mid- and long-term R&D, and basic and applied research to foster national competitiveness in science and technology - Providing comprehensive support to research conducted by other research centers and industries 					
KAIST's major businesses	<ul style="list-style-type: none"> ○ Education: Fostering creative talent, strengthening convergence education, nurturing global leaders in science and technology, strengthening human resource capacity ○ Research: Support for development of outstanding research projects, acquisition of specialized researchers, advancement of entrepreneurial culture, creation of high value-added intellectual property rights, promotion of technology transfer/commercialization, and development of large-scale, leading projects ○ Cooperation: Creating a working environment to be at par with global standards, and multifaceted cooperation for global leadership ○ Administration: Provision of administrative and technical service for international students/faculty (Support for operation of a "Korean-English bilingual campus") 					
Growth engines	<ul style="list-style-type: none"> ○ Vision: Global Value-Creative World-Leading University <ul style="list-style-type: none"> - Hub for Fostering Knowledge Creation and Global Convergence Talents - Center for the World-Leading New Knowledge and Technology) ○ Five innovation initiatives: Innovation in education, research, technology commercialization, globalization and future strategies ○ 3C Leadership: Change, Communication, Care 					
Duties and responsibilities	<ul style="list-style-type: none"> ○ Development of the active materials for IPMC actuators ○ Development of electrode materials and polymer electrolyte for energy storage devices ○ Design of triboelectric nanogenerator ○ Mechanical application of 3D phononic topological insulator 					

<p>Job performance details</p>	<ul style="list-style-type: none"> ○ Synthesis of the active materials for ionic soft actuator and analysis of electrochemical properties ○ Synthesis and electrochemical measurement of electrode materials for energy storage devices ○ Structural design and physical/chemical analysis of triboelectric nanogenerator ○ Design and construction of 3D phononic topological insulator
<p>Knowledge required</p>	<ul style="list-style-type: none"> ○ Material Science, Electrochemical Engineering, Chemical Engineering ○ Electromagnetism, Dynamics ○ Acoustic, Elastics, Solid State Physics
<p>Required skills</p>	<ul style="list-style-type: none"> ○ Ability to synthesize and design for the active materials ○ Material characterizations with XRD, XPS, SEM, TEM ○ Advanced electrochemical analysis ○ Signal processing, Numerical analysis, Mechanical design ○ Control and measurement of the mechanical wave
<p>Attitude while performing duties</p>	<ul style="list-style-type: none"> ○ Creative and challenged, Logical ○ Positive ○ High responsibility ○ High mutual cooperation
<p>Basic skills</p>	<ul style="list-style-type: none"> ○ Communication, Flexibility, Work ethics, Interpersonal skill
<p>Reference site</p>	<p>www.ncs.go.kr, www.kaist.ac.kr</p>