NCS-Based KAIST Job Description – Research position

Recruitment area	Satellite/ observation instrument Electronic System (outsourced researcher)	Classfication system	Major category	Intermediate category	Minor category	Detailed category
			* This job description is derived from KAIST's internal job analysis and may differ somewhat from the Korea Employment Agency's NCS standard classification (in areas where NCS has not yet been developed).			
Mission	○ Korea Advanced Institute of Science and Technology (KAIST) Act - 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	○ 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	○ Vision: Global Value-Creative World-Leading University - 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	○ Analysis, design, and development of electronic systems and units, including the On-board Computer (OBC) - Design of satellite/observation instrument - Development and testing of satellite/observation instrument - Electrical/Electronic analysis, design, and development for satellite/observation instrument - Digital circuit design for satellite/observation instrument - Analog circuit design and analysis for satellite/observation instrument - FPGA logic (HDL) design ○ Management, support, planning, and investigation for R&D projects					
Job performance details	○ Design of satellite/observation instrument subsystems and preparation of related development documentation ○ Development/testing of satellite/observation instrument modules and preparation of test procedures and result reports ○ Electrical/Electronic analysis, design, and development for satellite/observation instrument systems ○ Digital and analog circuit design for satellite/observation instrument systems and preparation					

	of schematics ○ FPGA logic (HDL) design and simulation ○ Project execution tasks, including project/planning management and the preparation of technical documents/reports
Knowledge required	○ Field of Satellite/Observation Instrument Systems Engineering - Understanding of satellite/observation instrument systems engineering - Understanding of development project management and the preparation/review of documents (e.g., specifications, procedures) for satellite/observation instrument systems ○ Field of Satellite/Observation Instrument Command & Data Handling (C&DH) Subsystems - Understanding of satellite/observation instrument C&DH systems - Theory and skills in digital circuit design - Skills in analog circuit design and analysis - HDL coding skills for FPGA logic design ○ Knowledge of electrical/electronic design and its applications ○ Overall understanding of R&D, project execution, and management for satellite/observation instrument systems
Required skills	○ Field of Satellite/Observation Instrument Systems Engineering - Skills in system requirements analysis and utilization of design software - Skills in mission design analysis, technical risk analysis and management, and system integration and verification for Satellite/Observation Instruments ○ Field of Satellite/Observation Instrument Command & Data Handling (C&DH) Subsystems - Skills in digital circuit design, analog circuit design and analysis for Satellite/Observation Instruments, and utilization of FPGA HDL coding and simulation tools - Skills in developing C&DH test equipment, and software/hardware design skills ○ Electrical/electronic design skills ○ Ability to research, collect, and analyze relevant information ○ Ability to prepare design review materials, proposals, reports, and presentation materials
Attitude while performing duties	○ An attitude of completing assigned tasks thoroughly with a sense of responsibility and mission ○ An attitude of deriving new ideas by understanding and integrating knowledge and information from diverse fields ○ An attitude of solving complex problems with flexible thinking and sharp insight ○ An attitude of communicating and collaborating based on mutual understanding and respect ○ An attitude of overcoming difficulties and failures with a spirit of constant challenge ○ Adherence to attendance policies, research ethics, proactive attitude, and willingness to take on challenges ○ Objective, logical, and comprehensive analytical approach
직업기초능력	○ Related fields such as aerospace, physics, astronomy and space science, mechanical engineering, control engineering, electrical engineering, electronics, information science, and telecommunications ○ Individuals with experience equivalent to a bachelor's or master's degree ○ Holders of a master's degree or higher
참고사이트	www.ncs.go.kr, www.kaist.ac.kr