

# 고려대학교 스마트융합학과 소개

2021학년도 모집



## □ 스마트융합학과 과정

- 고려대학교 일반대학원 석사 과정으로 개설/운영 중인 LG전자 채용계약형 학과
- 석사과정 중 LG전자에서 필요로 하는 분야를 육성하기 위한 별도 커리큘럼 구성
- LG전자 산학장학생으로 관리되며 석사 졸업 후 전원 LG전자 입사

### 석사과정 지원

등록금 지원



### LG전자 입사

석사 졸업 후,  
LG전자 연구원으로 입사



### 전문가 육성

미래에 필요한  
맞춤형 인재 육성 기회 제공



## □ 2021학년도 스마트융합학과 모집

- 지원대상 : 학부 4학년 재학생 중 2021학년도 전기 석사과정 진학 희망자
- 모집분야 : 미래 기술 분야(인공지능/SW/로봇)
- 전형일정



✓ **LG그룹 채용 시스템(LG커리어스) 을 통해 지원해야 함** ※ 대학원 입시 시스템 지원은 별도 안내 예정

- LG전자에서 제공한 추천 ID/PW를 부여 받은 학생에 한하여 온라인 지원 가능
- 지원경로 : LG커리어스(careers.lg.com) → Apply LG → 회원가입 → 추천ID 로그인 → 본인 로그인  
→ "2021학년도 전기 고려대 스마트융합학과 모집" 공고 선택 → 지원서 작성 및 제출
- 온라인 입사지원자 전원 인적성 기회 부여 (1차 서류전형 면제)
- 문의 : LG커리어스(careers.lg.com) 1:1 질문하기 (로그인 필요)

<추천ID 정보>

ID : 2021korea

PW : 2021korea#

## □ 입학자 혜택

- ✓ 졸업 후 전원 **LG전자 취업**
- ✓ LG전자 **산학장학금** 지급
  - 금액 : 1년 기준 1,800만원 / 수혜기간 : 총 2년
  - 산학장학금은 연 2회(2월/8월) 분할 지급
  - 입사 후 의무근무기간 발생 (전체 수혜기간의 2배) ※ 의무근무기간 도중 퇴직 시 전액 환수 규정 있음
- ✓ 입학 축하 선물로 **LG울트라와이드 모니터** 지급
- ✓ 입사 축하 선물로 **LG스마트폰** 지급

□ 전형단계별 개요

구분	내 용		
1차 서류전형	<b>본 전형 생략</b> 지원자격 요건, 자기소개서 등을 기준으로 인적성 대상자 선발		
인.적성 검사	적성 검사	언어이해/언어추리/자료해석/창의수리 4가지 영역으로 구성	60문항 (40분)
	인성 검사	LG Way에 맞는 개인별 역량 또는 직업 성격적인 적합도 확인	183문항 (20분)
최종 서류전형	인.적성검사 결과, 자기소개서, 직무 부합 등을 기준으로 면접대상자 선발		
면접전형	1차 면접	전공분야 이해수준 등 직무역량 평가 (지원자 전원 Computer Based Coding Test 진행) ※ 단, 기계공학 전공자 제외	
	2차 면접	열정, 비전, 잠재 역량 등 인성영역 평가 ※ 단, 추가적으로 직무역량을 검증할 수 있음	

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		H&A	HE	BS	CTO	생산 기술원	로봇 사업센터
A.I (Artificial Intelligence)	<ul style="list-style-type: none"> <li>■ Advanced Algorithm &amp; Control Intelligence                             <ul style="list-style-type: none"> <li>- Machine Learning, Deep Learning, Reinforcement Learning</li> <li>- R-CNN, LSTM/GLM, GAN, Auto ML, Meta-Learning, etc.</li> </ul> </li> </ul>	●	●	●	●	●	●
	<ul style="list-style-type: none"> <li>■ Cognitive Vision Intelligence                             <ul style="list-style-type: none"> <li>- Face Recognition, Vision Feature Extraction, Vision Data Augmentation, 3D Modeling</li> <li>- People tracking, Motion Prediction, Behavior Algorithm, Path Planning</li> </ul> </li> </ul>	●	●	●	●	●	●
	<ul style="list-style-type: none"> <li>■ Voice Intelligence                             <ul style="list-style-type: none"> <li>- Legacy and DNN-based Multi-Channel Speech Enhancement</li> <li>- Multi-modal based Speech Recognition, Speaker Recognition</li> <li>- Deep learning based Natural Language Understanding, Dialog Modeling, Transfer Learning(word semantics)</li> </ul> </li> </ul>	●	●	●	●	●	●
	<ul style="list-style-type: none"> <li>■ Big Data                             <ul style="list-style-type: none"> <li>- Data Mining &amp; Predictive Analysis</li> <li>- Data collection / ETL / Dashboard / Design &amp; Establishment of Data Service Platform</li> <li>- Cloud Server / Modeling / Web Programming</li> </ul> </li> </ul>	●	●	●	●	●	●
SW	<ul style="list-style-type: none"> <li>■ OS/Kernel                             <ul style="list-style-type: none"> <li>- OS : Android / webOS / Linux Kernel / Device Driver / BSP</li> <li>- OS Kernel / BSP (Memory Management / File System / Open Source Contribution)</li> <li>- Power Saving &amp; Battery Management (Fast Charging)</li> </ul> </li> </ul>	●	●	●	●		●
	<ul style="list-style-type: none"> <li>■ SW Architecture &amp; Application                             <ul style="list-style-type: none"> <li>- SW Training / SW Infra / SW Architecture / SW Process &amp; Tool / SW Test / SDET</li> <li>- SDK / Technical Evangelism / Mobile App</li> </ul> </li> </ul>	●		●	●	●	●
	<ul style="list-style-type: none"> <li>■ Middleware                             <ul style="list-style-type: none"> <li>- Web technology / Security / Media Streaming</li> <li>- Multimedia(Audio / Camera / Video)</li> <li>- Network &amp; Communication Protocol / LTE-A / Radio / Bluetooth / WiFi / Service / CAN / BAP Protocol / Diagnostic</li> </ul> </li> </ul>		●	●	●		●
Robot	<ul style="list-style-type: none"> <li>■ Robotics                             <ul style="list-style-type: none"> <li>- Pedestrian / Obstacle / People Recognition algorithm</li> <li>- RGB-D / Stereo Sensor &amp; control</li> <li>- People tracking / Motion Prediction / Behavior Algorithm / Global &amp; Local Path Planning</li> <li>- Interaction / Image Processing &amp; Computer Vision / 3D Vision Reconstruction / Robotics</li> <li>- SLAM (Simultaneous Location And Mapping) / Global Mapping / Localization</li> <li>- Robot SW Platform Design / Embodiment / BSP Porting / Device Driver Design</li> <li>- Automotive Radar System Radar and Algorithm Development</li> <li>- Mechanism / Circuit / Control R&amp;D / Robot Manipulation</li> </ul> </li> </ul>	●			●		●
	<ul style="list-style-type: none"> <li>■ Automation Robotics                             <ul style="list-style-type: none"> <li>- Robot Automation / Transferring (Stocker / AGV / Conveyor) / Logistics Consulting and Engineering</li> <li>- Robot Motion (3D bin Picking, Flexible Material Handling, Cable locking, etc.)</li> <li>- Auto Teaching / Path-Planning Algorithm (OLP, MIMIC, etc.)</li> <li>- End-effector Design (Gripper, T/F Sensor)</li> <li>- Robot AGV Actuator (Motor / Driver / Encoder)</li> <li>- Robot Application Technology (Assembly, Gluing, Grinding / Polishing, Welding, etc.)</li> </ul> </li> </ul>	●			●	●	●

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Signal Processing	■ Communication & 5G/6G - OFDM, MIMO, Error Correcting Codes, Network Virtualization, Cross-link Optimization, Scheduling, Quantumn Computation, THz, mmWave, FDR, V2X				●		
	■ Media Processing - Video Codec, Point Cloud, Media Orchestration - Audio Codec, Sound Quality Enhancement				●		
Wireless Technology	■ Wireless Technology - Wireless (RF / Antenna Design) Charging Technology - Wireless Charging Coil Design / EMF / EMC				●		
Image Quality	■ Display Device Image Quality Optimization & SW Algorithm Development - Image Processing / Measure and Evaluation / System SW Engineer ■ Monitor Signage - Image Processing & Computer Vision - Speech & Audio Processing - Virtual / Augmented Reality (VR / AR) - Mechanical Design / BLU Design / CAE	●	●	●			
Material	■ Micro/Mini LED - Optoelectronic Materials and Device - Chip/Package - Nano LED and pixel level Chip Package			●			
Optics	■ Lens Design and Analysis - High Precision Projection Lens - Inspection Optics for 3D-Sensor Camera/Semi-conductors - Photo Lithography System - Auto-Focus System / Optical Alignment system					●	

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Production Engineering	<b>■ Advanced Technology</b> - Semiconductor Process(Dry Etch) & Semiconductor Equipment - Applied Optics / Optic Design - AI / Intelligent Algorithm / Machine Learning / Deep Learning / Neural Network - High Power & High Precision Control Design / Design of Precision Mechanism - Atmospheric Pressure Spatial ALD / Large-Area PLD - High-Speed / Low Temp. Sintering of powder or Ink / Paste / microscale Device - Electronic Circuit Design / High Speed Digital Circuit Design / Large Scale Integration - Power Circuit Design / Power Circuit Control / High Power Packaging					●	
	<b>■ Automation Technology</b> - Coating / Dispensing / Bonding / Laminating / Secondary Battery Technology - Printed Electronics Technology / Roll-to-Roll Transferring Technology - Vehicle Components (Motor / Stator / EV Battery) Equipment Technology - Robot Automation / Transferring (Stocker / AGV / Conveyor) / Logistics Consulting and Engineering					●	
	<b>■ Process Technology</b> - Patterning Technology / Laser Application / Thermal Process Technology - Vacuum / Deposition / Plasma Application Technology					●	
	<b>■ Inspection &amp; Control Systems</b> - Machine Vision / Image processing / Pattern recognition / Image optics / 3D measurement - Electrical inspection / Sensor application / Inkjet printing - Wireless measurement / Digital signal inspection / Power control / Embedded system					●	
	<b>■ Production Base Technology</b> - Structural / Impact Analysis & Optimization Design / Fluid / Thermal Analysis & Design - Noise & Vibration & Harshness Design Automation & Validation / Prognostic Health Management / Data Analytics - GPU/CPU Architecturing / Parallel Computing Design / AR / VR Programming - Production Environment / Particle Control & Airborne Particulate Monitoring - Welding / Casting / Diecasting / Metal Forming / Molding / Printing / Spray Coating - Glass Forming / Glass Strengthening / Ceramic & Ceramic Spray - Electronic Packaging / Micro-Electronic Joining / Soldering					●	
	<b>■ Production System Engineering</b> - Production System(Manufacturing Process / Line / Factory) Design & Verification - Production & Operation Management / Optimization of Supply Chain Design - Product Architecture Planning & Optimization / Design Standardization / Product Development Process / Procurement Engineering - Quality Management / TRIZ / Statistical Modeling & Mining of Big Data - Equipment SW Architect / Development of Equipment Operation					●	