KAIST EE
KAIST ELECTRICAL ENGINEERING

iURP Research Plan

Title	PCB Modules for Universal Circuit Test and Measurement Platform
Summary	The group needs a universal platform for testing various analog / digital circuits, including power converters, ADCs, sensors, processors, and AI accelerators. Now we rely on bulky measurement equipment, and modular PCB-based system will ease the testing and measurement. We are looking for a student who can help us build PCB hardware and/or software stacks for controlling these modular units.

Period	Topics/Tasks
Week 1 (Dec. '21)	Project requirements discussion
Week 2	Introduction to Altium Designer - Schematic
Week 3	Introduction to Altium Designer – Layout
Week 4	Architecture design Component value calculation Schematic design 1
Week 5	Schematic design 2
Week 6	Board layout 1
Week 7	Board Layout 2 Sending design files to PCB manufacturer
Week 8	Control software development in Python Testing serial interface messages
Week 9	Embedded application development in C
Week 10	Board assembly Testing

Call for Participants

Prerequisites Backgrounds Qualifications	Basics on analog / digital electronic circuits Experience on area-efficient PCB design Python programming skills for embedded system control Basics of C programming for microcontrollers
# of participants sought	1 or 2

Advisor and Lab Info.

Advisor	Prof. Wanyeong Jung
Lab Name	Smart Energy-Efficient Design Laboratory
Lab Link	https://seed.kaist.ac.kr/
Research Area (Division)	Circuit
Contact: Teaching assistant (email)	**Michal Gorywoda hotwater@kaist.ac.kr**