



香港城市大學
City University of Hong Kong

Research-Oriented Designer Advanced Instrumentation Lab Course

Project Number: 6000772

Principal Investigator: Dr. Danfeng LI

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Abstract:

Advanced Instrumentation is a core course in the training curriculum of Materials Physics. While in usual course settings, state-of-the-art techniques of materials growth/characterizations are covered, as the students are rarely given the opportunities to directly work on many of the instruments, their experience of high-level participation has always been lacking. Through this proposed project, the PI, as an experienced Materials Physicist, together with a Research Assistant, will make special design on the course content and transform the Tutorial sessions into a linking point from the abstract and narrative Lecture notes to the real application of the techniques. This will be achieved by giving well-crafted instrumentation-focused literature research, in accordance with stimulating lab visits. Based on these, the participation of the students can be further promoted by computer-based hands-on exercises of learning existing instrumentations and final team projects of designing forward-looking lab-use-oriented new instrumentations, which can be directly implemented to the research work. The success of this project will be marked by the anticipated high satisfaction of the students in enrolling into the cutting-edge research; and will benefit the researchers at CityU, as nowadays more and more scientific discoveries and technological advancements heavily rely on the unique home-designed, home-made scientific instruments.