



2024 SMART WORKSHOP

SEMICONDUCTOR MANUFACTURING AND ADVANCES IN RECENT TECHNOLOGIES

ABOUT THE PROGRAM

UCF is proud to present SMART, an intensive two-week program on semiconductor manufacturing and advances in recent technologies. This program is designed to give students an understanding of the steps involved in semiconductor manufacturing and its challenges. The SMART program will teach students the key concepts and process parameters of each unit process, engage directly with experienced instructors and get hands-on experience with the equipment in the UCF cleanroom.

TARGET APPLICANTS

Attendance is open to the general technical community and is not limited to current UCF students. Anyone interested in semiconductor cleanroom fabrication techniques is strongly encouraged to attend. The course suits both new and experienced researchers interested in microfabrication techniques and applications. Preference will be given to interested faculty from high schools and colleges.

MODALITY

The workshop will be held from Monday, July 8 to Friday, July 19. At the end of the training, each qualified trainee will be presented with a UCF SMART Workshop certificate. Workshops consists of lecture, interactive and laboratory sessions.

WORKSHOP DETAILS



July 8 - 19, 2024
9 a.m. - 2:30 p.m.



UCF Main Campus



Limited to 12 participants



Participants will receive a \$1200 stipend and build their own devices

REGISTER BY JUNE 14:



FOR MORE INFORMATION, CONTACT

SMART-WORKSHOP2024@UCF.EDU





2024 SMART WORKSHOP

SEMICONDUCTOR MANUFACTURING AND ADVANCES IN RECENT TECHNOLOGIES

WORKSHOP INSTRUCTORS

UCF Department of Electrical and Computer Engineering

Reza Abdolvand, Ph.D.
Avra Kundu, Ph.D.

UCF Department of Materials Science and Engineering

Tengfei Jiang, Ph.D.
Parag Banerjee, Ph.D.

UCF Department of Physics

Jing Xu, Ph.D.

.....

MODULES

1. How it all began: The discovery of silicon to modern semiconductor electronics.
2. The CHIPS and Science Act and what it means for the semiconductor ecosystem.
3. Materials used and their properties: What is a semiconductor and why is it so important we understand it?
4. Deep dive into the semiconductor manufacturing process. Overview of cleanroom safety, gowning protocol and substrate preparation. Basic fabrication training intended to introduce first-time users to deposition, etching, lithography and characterization systems. Participants will use this knowledge to fabricate their own device using cleanroom equipment.

SEMICONDUCTOR SYNERGY

This workshop is part of an ongoing initiative by the UCF Department of Electrical and Computer Engineering for semiconductor workforce development. We have active collaborations with Intel and Texas Instruments, as well as department-funded co-op positions which aim to impart hands-on training in microfabrication tools and processing. Such efforts will provide us with the means to attract top talent, enabling our industrial partners to have direct access to a sustainable pipeline of well-prepared talent.