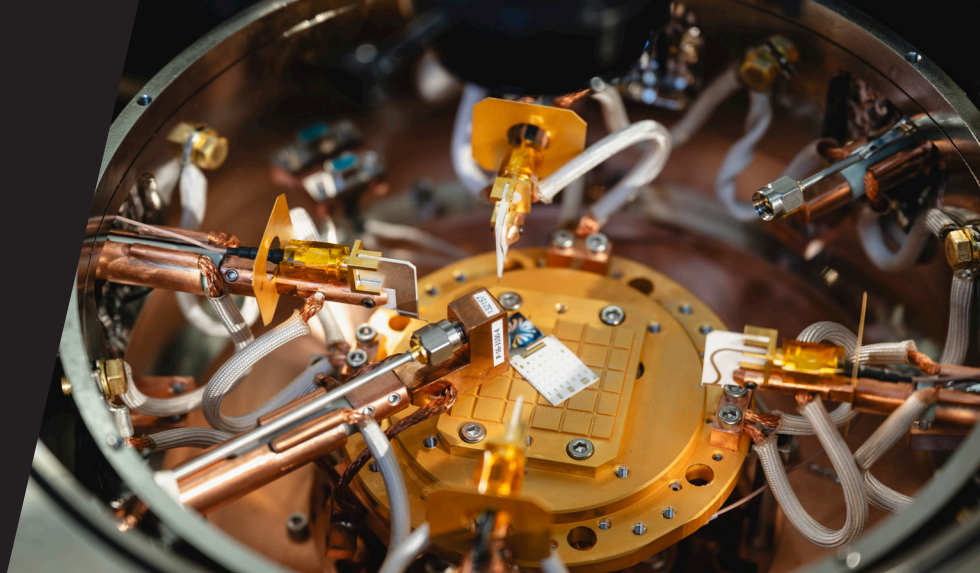


SEMICONDUCTOR WORKFORCE DEVELOPMENT



3,000

STUDENTS ENROLLED IN
SEMICONDUCTOR-RELATED
COURSES

175

STUDENTS COMPLETING
SEMICONDUCTOR
CONCENTRATIONS

160

STUDENTS EARNING
SEMICONDUCTOR
CERTIFICATES

Purdue offers one of the nation's first comprehensive semiconductor degree programs, providing innovative degrees and credentials for graduate and undergraduate students, designed to rapidly develop a highly skilled workforce.

DEGREE AND CERTIFICATE PROGRAMS

Semiconductor certificates, available at both undergraduate and master's levels, incorporate experiential learning programs, study abroad and internship opportunities

Students can tailor their education to specific areas of interest within the semiconductor field through various **residential concentrations and minors in multiple departments**.

For those seeking flexibility, Purdue also offers one of the first **online semiconductor program** of its kind in the United States, featuring online Master of Science degrees in multiple departments, an interdisciplinary Master of Science in microelectronics and semiconductors, and non-degree certificates.



Mentoring in the educational bay of the Scifres cleanroom at Birck Nanotechnology Center. (Purdue University/Charles Jischke)

100+

SEMICONDUCTOR-RELATED
COURSES ADDRESSING
ALL INDUSTRY SECTORS:

- Advanced packaging
- Chemicals and materials
- Chip design
- Manufacturing
- Supply-chain management
- Tools

CHOICE OF CREDENTIALS

- Undergraduate certificates, concentrations and minors
- Residential and online master's degrees
- Stackable post-graduate certificates
- Associate degrees through a partnership with Ivy Tech Community College

KEY PARTNERSHIPS

SCalable Asymmetric Lifecycle Engagement

(SCALE): A 33-university network headquartered at Purdue and funded by public- and non-profit-sector entities, SCALE focuses on workforce development for defense and industry applications.

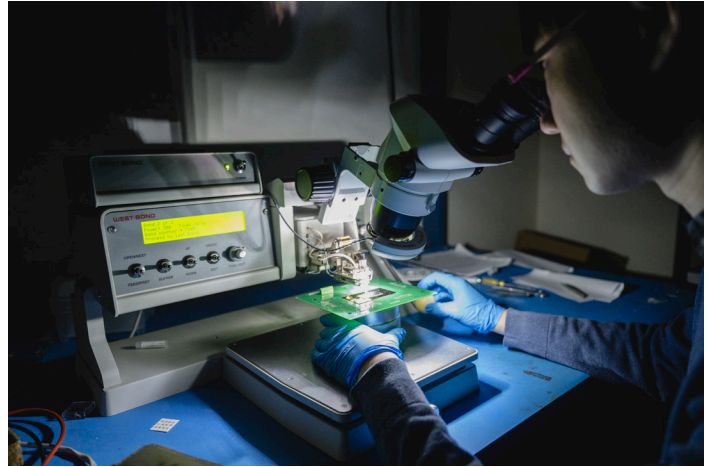
SCALE has specialized expertise in student placement and curriculum development. By combining knowledge, skills and input from technical experts, more than 80 courses have been created or updated across participating institutions, including vertically integrated projects courses.

SCALE K-12 programs reach students across three states. SCALE partners with the Semiconductor Degrees Program on curriculum development, new certificates and experiential learning programs.

Ivy Tech Community College: Serving more than 170,000 Indiana students, Ivy Tech establishes training programs on semiconductor manufacturing and advanced packaging, including cleanroom facilities development. Purdue and Ivy Tech serve local workforce development needs and create pathways for students to continue their studies at Purdue.



A student places solder balls on a BGA test board in the electrical materials lab. (Purdue University/Charles Jischke)



Purdue's semiconductor degree programs offer students hands-on experience working with state-of-the-art equipment. (Purdue University/Charles Jischke)

EXPERIENTIAL LEARNING

Changing the World with Chips: This course, from the College of Engineering's Office of Professional Practice, Participants will develop their professional networks and gain resources and opportunities to prepare for exciting careers.

Summer Training, Awareness and Readiness for Semiconductors (STARS): STARS is a summer internship program for students to develop practical expertise in one of three tracks: chip design, semiconductor manufacturing, or advanced packaging. Design-track students create a chip for production at a commercial foundry, while manufacturing and packaging students conduct hands-on experiments in Purdue labs.

VIP SoCET: Under Purdue's Vertically Integrated Projects program, the Purdue SoCET — system-on-chip extension technologies — gives students hands-on experience with a fully developed, industry-quality, system-on-chip design flow. Currently 220 students strong, group members work with commercial design tools to design processor chips that are prepared and fabricated at foundries.

VIP@Birck: Student-led teams perform projects on semiconductor topics of statistical process control or heterogeneous integration/advanced packaging. Each team takes on at least one unit process step or a process-integration challenge, defined in collaboration with faculty members, engineers and graduate students at Purdue's Birck Nanotechnology Center.



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