ITSI International Technology Security & Innovation

DIVERSIFYING SEMICONDUCTOR SUPPLY CHAINS

Supported by:

In partnership with: Arizona State University

Semiconductor Faculty Certification (SFC) Program

Implement semiconductor assembly, test, and packaging programs (ATP) at your institution.

Faculty from higher education institutions in ITSI Partner Countries are invited to apply today to enrich educational structures in semiconductors within their institutions, gaining the knowledge and refining their frameworks to develop work-ready professionals, prepared to meet the demands of the semiconductor ATP industry.

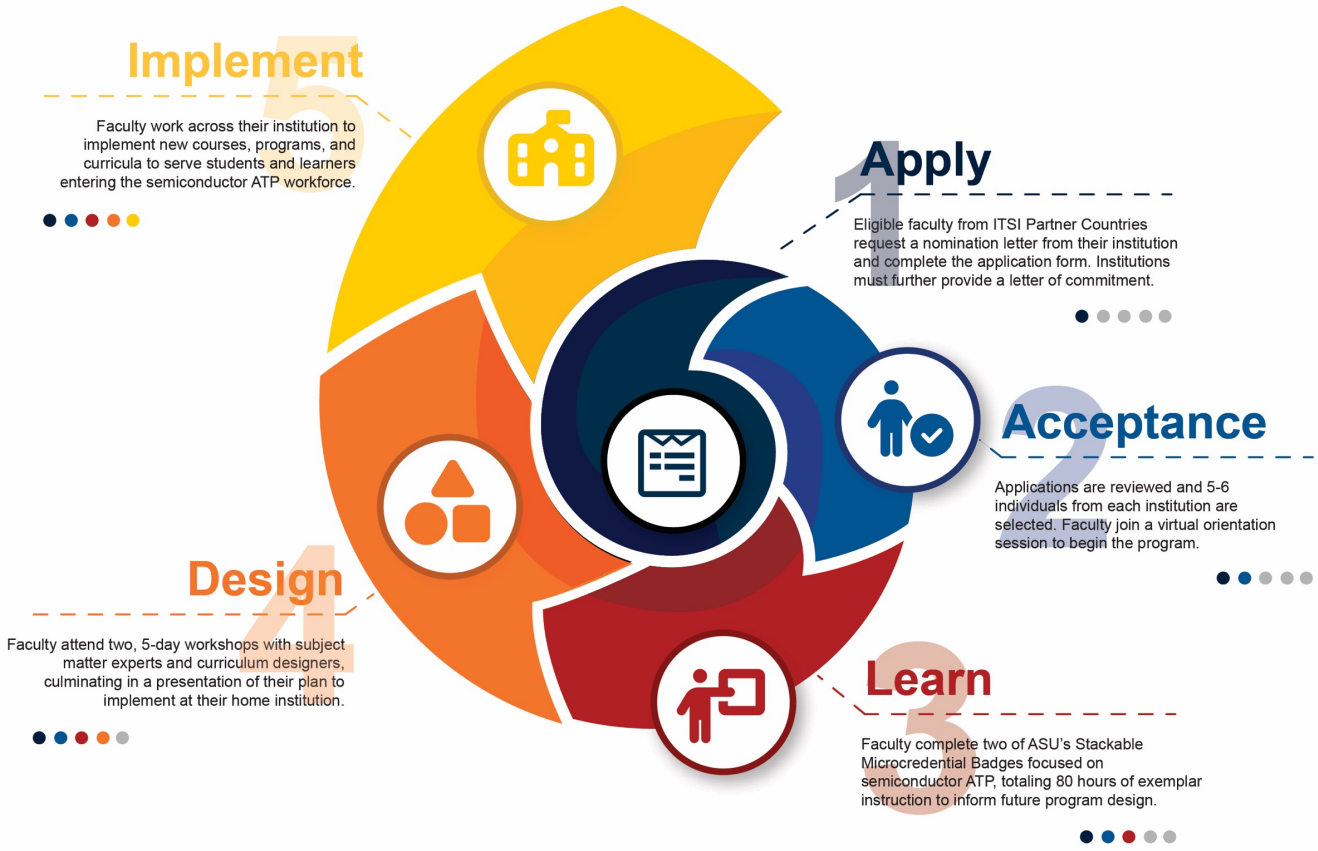
This program is provided to faculty free of charge thanks to sponsorship through the US Department of State's Bureau of Economic and Business Affairs' International Technology Security Innovation (ITSI) Fund.

Faculty Eligibility Criteria

- Must be nominated by university leadership
- Groups of 5–6 faculty from each identified university
- Disciplines: Electrical, Mechanical, Materials, and Industrial Engineering
- Degrees: Master's minimum; PhD preferred
- English language proficiency: Level B2 or higher

Participants will complete the program with:

- A detailed curricular plan to implement semiconductor ATP programs at their home institutions
- Semiconductor Faculty Certification from ASU, taught by renowned ASU Engineering Faculty and Industry Experts
- Two microcredential digital badges from ASU Engineering



For questions contact us at **exec-fseonline@asu.edu** or **(480) 965-1740**.

Apply today!

Program Overview

Apply:

Institutions begin by providing a letter of commitment by **7/26/24**.

Institutions nominate eligible faculty and nominees complete an individual application form.

Applications are due by **08/05/2024.**

Acceptance

ASU selects 5-6 individuals from each institution to participate, which will be notified by **8/12/24**. Faculty will be invited to join a virtual orientation on **8/21/24** session to begin the program.

Learn

Faculty complete two of ASU's Stackable Microcredential Badges focused on semiconductor ATP, totaling 80 hours of exemplar instruction to inform future program design. Courses are offered live on Zoom.

Semiconductor Packaging Foundational Concepts and Drivers
September. 3–26, 2024
Monday, Tuesday, and Thursday | 5:30–9 p.m. MST

- Intro to Semiconductor Packaging & Design (T, W, Th due to US Holiday. Course sessions on 9/3 – 9/5)
- Intro to Electrical Concepts in Semiconductor Packaging
- Intro to Thermal Management & Mechanical Properties of Packages
- Intro to Packaging Materials, Manufacturing, Test, and Reliability

Semiconductor Packaging, Assembly, and Test
October 7–31, 2024
Monday, Tuesday, and Thursday | 5:30–9 p.m. MST

- 2D Packaging & Assembly
- Materials Selection for Thermo-Mechanical & Electrical Performance
- Application of Electrical & Thermo-Mechanical Modelling
- Test & Data Analysis for Quality & Reliability

Design

Faculty attend two, 5-day workshops with subject matter experts and curriculum designers, culminating in a presentation of their plan to implement at their home institution.

Faculty Development Workshop
5 days in-person | In-country | Dates TBA- Fall 2024

Subject matter experts will guide participants through a series of interactive sessions, hands-on activities, and collaborative discussions aimed at integrating micro-credentials and certificates into existing programs.

ASU Curriculum Design Workshop
5 days in-person | In-country | Dates TBA- Spring 2025

Participants collaborate in institutional faculty teams to develop and present a final curriculum plan. ASU Instructional Design works directly with faculty teams to develop their curriculum plan and instructional pedagogy, culminating in faculty presentations of their unique curriculum design plans.

Implement

Faculty work across their institution to implement new courses, programs, and curricula to serve students and learners entering the semiconductor ATP workforce. Institutions will report on successful implementation and plan for increased scale.

What is ITSI?

In collaboration with the U.S. Department of State's Bureau of Economic and Business (EB) Affairs, Arizona State University (ASU) is implementing a program to help diversify the global semiconductor supply chain. This initiative is supported by the International Technology Security and Innovation (ITSI) Fund, established under the U.S. CHIPS and Science Act of 2022. The initiative seeks to expand semiconductor chip assembly, testing, and packaging ("ATP" or "downstream") operations in key partner countries in the Americas (Costa Rica, Mexico, and Panama) and the Indo-Pacific (Indonesia, Philippines, and Vietnam), thereby fortifying a resilient supply chain for global semiconductor manufacturers.

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