

3225 25th Street SE Salem, Oregon 97302 www.oregon.gov/HigherEd

September 2, 2025

This memo is intended to provide a high-level overview of the proposed process for implementing the Higher Education Coordinating Commission's (HECC) Semiconductor Talent Sustaining Fund, established by House Bill 4154 (2024). This information is being released to notify potential applicants of an imminent grant opportunity. HECC reserves the right to modify any elements of this solicitation as will be reflected in the subsequently issued Request for Applications (RFA). Questions and feedback will be used to inform the RFA and should be submitted to Jennifer Purcell, Director, Future Ready Oregon, at Jennifer.Purcell@hecc.oregon.gov by 5:00 p.m. Friday, September 19, 2025.

#### **Semiconductor Talent Sustaining Fund Scoping Proposal**

As required by statute, HECC will allocate moneys from the Semiconductor Talent Sustaining Fund to provide education, training, and research to assist the semiconductor industry in:

- a. Propelling industry innovation and productivity; and
- b. Providing careers to residents of this state who receive technical certificates, credentials, technical degrees, associate degrees, bachelor's degrees and graduate-level degrees in fields related to semiconductors.

#### HECC will consider allocations that:

- Address the most-demonstrated pressing and long-term needs of the semiconductor industry;
- b. Advance a more diverse workforce, with a focus on increasing career opportunities for historically underrepresented youth and adults;
- c. Utilize the information compiled in and recommendations made by the final report of the <u>Semiconductor Workforce and Talent Assessment (January 2024)</u> that was prepared for the commission;
- d. Facilitate or advance workforce opportunities created by federal or state semiconductor financial assistance investments;
- e. Create new economic growth and pathways to economic opportunity across Oregon; and
- f. Consider the priorities of HECC's Manufacturing and Technology Industry Consortia.

#### HECC will administer the funding in accordance with the following values:

- Equity and Inclusion: Ensuring access to educational, training, and research
  opportunities for underrepresented communities including but not limited to:
  communities of color, women, low-income communities, rural and frontier
  communities, veterans, persons with disabilities, incarcerated and formerly incarcerated
  individuals, members of Oregon's tribes, older adults, and individuals who identify as
  members of the LGBTQ+ community.
- 2. Transparency: Maintaining an open process in decision making, reporting, and performance measurement.
- 3. Accountability: Holding recipients and administrators responsible for outcomes, financial stewardship, and program integrity.
- 4. Workforce Relevance: Aligning training programs with employer needs to ensure job placement and long-term growth.



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- 5. Innovation: Encouraging novel approaches to workforce development (e.g., new models, technologies, partnerships); and advancing innovation as a skill set (i.e., empowering individuals with the skills of innovation).
- 6. Collaboration: Fostering partnerships among industry, educational institutions, local workforce development boards, and community-based organizations; and considering project impact, balancing the impact of the award with the articulated values to ensure the investment positions Oregon competitively in the global economy.
- 7. Efficiency: Maximizing impact while reducing administrative burdens on participants and partners.
- 8. Regional Impact: Supporting place-based strategies that strengthen local and regional economic ecosystems.

HECC will apply the following program parameters for funding decisions:

- Strategic alignment with existing state/industry workforce development priorities in the semiconductor and Artificial Intelligence (AI) sectors. The <u>Oregon Semiconductor</u> <u>Workforce and Talent Assessment</u> (January 2024) should be used as a guiding document
- 2. Prioritize funding for underrepresented and underserved populations, including but not limited to:
  - Communities of color;
  - Women;
  - Low-income communities:
  - Rural and frontier communities;
  - Veterans:
  - Persons with disabilities;
  - Incarcerated and formerly incarcerated individuals;
  - Members of Oregon's nine federally recognized Indian tribes;
  - Individuals who disproportionately experience discrimination in employment on the basis of age; and
  - Individuals who identify as members of the LGBTQ+ community.
- 3. Demonstration of employer engagement in applications. This may include employer commitments to co-design curriculum, provide equipment, guaranteed job interviews or job placement, provide earn-and-learn or other work-based learning opportunities, or experiential research, for example.
- 4. Inclusion of description of the scalability of program and a plan for sustainability beyond this investment.
- 5. Budget is reasonable and demonstrates cost efficiency. Administrative costs are minimized in favor of participant services and outcomes.
- 6. Geographic/Regional impact.
- 7. Prioritize collaborative projects that bring in multiple organizations and/or institutions to maximize impact, leveraging individual organization's strengths.

HECC expects outcomes and performance metrics will be disaggregated by gender/race/ethnicity/geography, and may include:

- 1. Number of individuals trained (enrollment)
- 2. Retention and persistence rates in education
- 3. Credential attainment rates (completion)



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- 4. Job placement and job retention rates
- 5. Starting wages and wage gains
- 6. Economic development/research and innovation indicators, such as:
  - a. Number of startups incubated and supported
  - b. Job creation and revenue growth attributed
  - c. Number of collaborative research projects launched through partnerships with industry and Oregon's colleges and universities
  - d. Volume of research outputs, including patents, publications, and commercialized technologies
  - e. Grants and funding secured for microelectronics (semiconductor/AI focused) research initiatives in Oregon

HECC proposes the following process for awarding and administering Semiconductor Talent Sustaining Fund grants:

- 1. HECC will develop a Request for Applications (RFA) for the strategic funding opportunity
- 2. The RFA will be directive, focused on expected outcomes (see Semiconductor Talent Assessment Highlights and Semiconductor Consortium Resources below)
- 3. Project proposals will be presented to HECC Staff and an advisory group for evaluation
- 4. HECC expects to award two to four projects in amounts ranging from \$1.5M and \$5M and not to exceed \$8.5M in total.
- 5. Tentative timeline:
  - a. Early September 2025: Release a scoping proposal that outlines the values, funding priorities, parameters for funding decisions, and proposed approach; this scoping proposal will be available on HECC's website through September 19, 2025 and feedback received will be used to inform an RFA to be released in the Fall.
  - b. September/October 2025: Release RFA.
  - c. October/November 2025: Proposals due and presentations scheduled for a small advisory group to evaluate proposals and ask questions of applicants and their partners.
  - d. November/December 2025: HECC will make funding decisions, prepare and execute grant agreements.
- 6. HECC will engage an advisory group to evaluate proposals and ask questions of applicants and their partners. Composition may include members of HECC's Manufacturing Industry Consortium, HECC's Technology Industry Consortium, Oregon Business Council's Semiconductor Talent Consortium, the Governor's Office and HECC Staff. To avoid potential conflicts of interest, the advisory group will not include individuals who represent organizations or institutions that expect to apply for funding either directly or in partnership.

## **Semiconductor Talent Assessment Summary Highlights**

Recommendations from the Semiconductor Talent Assessment focus on two main areas for positively impacting workforce needs in the sector: pre-career and mid-career pathways. In the former, the emphasis is on creating and illuminating accessible pathways into semiconductor careers, while the latter emphasizes up-skilling and training for incumbent workers. Per the Talent Assessment, projects that are likely to be successful in either of these two priority areas would account for the following barriers:



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- Lack of industry participation in curriculum and training programs
- The real costs of additional training for incumbent workers, like transportation, lost wages, additional equipment or technology.
- The lack of incentive for additional training for incumbent workers (i.e., wages that don't "feel" like they are worth the effort/time).
- The gap between the more general curriculum of college and university STEM programs and the specific skills and knowledge needs of the semiconductor industry.
- Lack of funding at universities and colleges for the specialized and sophisticated equipment used at semiconductor facilities.

Adapted from Exhibit 7. Employment Projections, Semiconductor Industry's Top Occupations, Oregon (p. 6)

(Updated. Oregon Employment Department (2023). Occupational Employment Projections. Accessed at: https://www.qualityinfo.org/)

Occupation	2023 Oregon Employment	Oregon Employment (% Change 2021- 2023)	2033 Oregon Employment	Oregon Employment (% Change 2023-2033)	Total Annual Openings
Software Developers/Testers	21,977	117%	28,444	29%	1,942
Miscellaneous Assemblers	12,032	116%	11,917	-1%	1,268
First-line Supervisors of Production and Operating Workers	9,529	131%	10,105	6%	967
Inspectors/testers	6,310	97%	6,375	1%	731
Electronics Engineers	843	17%	926	10%	56
Electrical/Electronics Assemblers	3,620	76%	3,919	8%	427
Semiconductor Processing Technicians	4,708	103%	5,087	8%	571
Industrial Engineers	4,049	91%	4,809	19%	338
Engineering Managers	4,337	109%	4,817	11%	341
Heating, Air Conditioning, Refrigeration Mechanics, and Installers	4,373	117%	5,208	19%	483
Mechanical Engineers	3,190	88%	3,833	20%	254
Electrical Engineers	3,438	123%	3,857	12%	240
Electrical/Electronic Engineering Technologists and Technicians	2,651	100%	2,764	4%	257
Computer Hardware Engineers	61	5%	67	9%	3
Chemical Engineers	100	33%	115	15%	8
Total/Average	81,218	101%	92,243	11%	7,886

#### **Additional Semiconductor Talent Consortium Resources**

#### Goals:

- 1. Increase semiconductor-related degree and credential completion.
- 2. Increase % of semiconductor-related degree completers employed in sector after 5 years.
- 3. Increase diversity of semi-related degree and credential completers and semiconductor workforce.



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# Mapping of Oregon Degrees to Roles and Sectors



"For Indication Only"

Cartoon of typical mapping from Oregon degrees to Semiconductor Industry positions and sectors

Estimated annual Oregon Semiconductor industry new employee needs for 2023-2030 from publicly available data

Data sources: Quantity of hires needed 2023-2030 from sources cited in earlier page; estimated splits of job type needs from SIA's State of the U.S. Semiconductor Industry Report 2024. Sept 2024

## 2025 Action Plan

Quarterly review by Consortium partners to ensure alignment & continuous improvement

Need	Deliverable	2025 Metrics	Lead	
Ignite Interest in Semiconductor Careers	Semi Central website	Design & Launch in Q4 2025	FAST (Julie), Consortium support	
	Semiconductor Symposium	Design & Launch Fall 2025, Host 3 events in 2025	Industry Coalition (Scott, Russell), FAST support	
	K-12 semiconductor curriculum, or classroom kits	Create model and launch by National Engineers Week (Feb 2026)	Oregon STEM (Deb, Kristen, Venkat), Consortium support	
Expand Hands-on Experiential Learning	Internship/externship opportunities for	Assess and quantify existing opportunities by July 2025	Industry Coalition (Russell), Consortium support	
	students and educators	Develop strategy to expand opportunities	Oregon STEM (Deb), Consortium support	
Grow & Upskill Workforce through Agile Pathways	Accelerate & align stackable, transferable credits, credentials & degrees	Pilot stackable credentials by degree/pathway or in a region by 2026	FAST (Rob), Consortium support	
Improve Foundational STEM Skills	Strategy to improve math & science proficiency	Pilot integration of AI tools in 4 schools districts by 2026	Oregon STEM, with support from STEM Investment Council, WTDB (Venkat, Deb)	