

SIXTH AI IN STEM CCPI-CAST FOCUSES ON INTEGRATING AI INTO WORKFORCE SKILLS & ADVANCED MANUFACTURING

The CCPI-Cast closed its six-part series on artificial intelligence (AI) during 2025-2026 with [Integrating AI into Workforce Skills and Advanced Manufacturing](#) on May 29.

This webinar delivers an overview of the AI issues that concern two-year college educators. It provides information about the [American Association of Community Colleges' \(AACC\)](#) effort to address the array of complex AI-related issues confronting community colleges. The webinar also features detailed information about [South Texas College's](#) cross-discipline effort to prepare students to be AI savvy in their careers.

Dr. Elizabeth Hawthorne, co-principal investigator of the Community College Presidents Initiative in STEM (CCPI-STEM), moderated the program, as she has all 22 of the project's webcasts, which are available for free at <https://www.ccpi-stem.org/webcasts-podcasts>. [CCPI-STEM](#) is an [Advanced Technological Education](#) project funded by the [U.S. National Science Foundation](#).

The majority of the 30 audience members who participated in a poll at the beginning of the webcast identified the lack of faculty expertise, unclear policies, and resistance to change as the biggest barriers to the integration of AI in science, technology, engineering, and math (STEM) curricula. About half of the respondents indicated their top concerns about AI in higher education are data security, overreliance on AI, and academic integrity.

AACC's Workforce Development Team Addresses AI Issues



Kathleen "Katy" Nelson, Project Manager for Workforce and Economic Development at the American Association of Community Colleges, explained how she and others at the advocacy organization for associate-degree-granting institutions have been collaborating with community colleges, foundations, companies, and other institutions to address AI-related issues.

These "really complicated conversations" have delved into the needs students, faculty, staff members, businesses, and industries. The questions the team has tackled include the following: What are community colleges doing as a sector? What are we doing as businesses to use AI appropriately? How are educational institutions protecting academic freedom? How are we protecting academic integrity? How are we educating students with the competencies that they're going to need moving forward?

Nelson said the AI-related competencies that students will need depends on their career plans. For example, the AI skills nursing students need to learn are different from those needed by individuals pursuing careers in accounting or advanced manufacturing.

"These conversations are ongoing everywhere," she said. She encouraged people to see the free webinars at [AI Skills for All](#) and the best practices being developed by the [AI Incubator Network](#).

Nelson also directed audience members' attention to the professional development for faculty and staff offered for free by National Applied AI Consortium (NAAIC).

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Nelson said AACC has been working closely with NAAIC. She pointed out that NAAIC offers training and AI resources for community college staff members to use in their jobs and for faculty to integrate AI into their teaching.

NAAIC is a [U.S. National Science Foundation](#)-funded [Advanced Technological Education](#) project that has numerous course curricula and other free AI-related resources on its website. NAAIC is hosted by [Miami Dade College](#) (Florida) in partnership with [Houston City College](#) (Texas) and the [Maricopa Community Colleges](#) (Arizona). NAAIC is featured in [CCPI-Cast Episode 19](#).

South Texas College Utilizes Multi-Faceted Approach to AI



Erika K. Guerra, Department Chair of Advanced Manufacturing Technology and Robotics and Mechatronics Technology at South Texas College, explained how the college identifies, maps, and tracks AI integration in programs across its campuses.

She explained that industry advice about where to add AI tools is considered along with analysis of whether the proposed change enhances curriculum and helps students with hands-on learning. Guerra shared that a meeting with department chairs prompted recalibration of the tracking to capture the use of general AI tools and the specific AI tools used by various industries.

The examples she cited include construction courses, which at this point take a more theoretical approach, while a culinary arts course is using AI-assisted design software for students to do restaurant layouts.

In advanced manufacturing, multiple AI applications are being used for modeling, simulation, and design. For example, precision manufacturing students use tools that allow them to compare models they make independently with ones they construct with AI. Another course focuses on students learning tools for predictive maintenance, quality control, demand forecasting, production planning, and scheduling. Meanwhile, a grant-funded research project involves students in the collection of real-time motor sensor data.

She pointed out that many AI applications are available for free to students who use their .edu email addresses.

For manufacturing technology students' capstone course presentations Guerra said she "purposely invited industry leaders that were at different levels of automation and artificial intelligence." Representatives from the larger manufacturers already using AI had specific feedback for the students. For others in the audience the students' presentations raised awareness about how AI could be used in their operations and what the college's graduates could do.

"Because of these capstone projects, they're really coming to us with wanting more collaboration, so that either we go in and help them out, or they're giving us projects to bring in to the college," she said.