2016 AWARD WINNER

EXCELLENCE IN ACTION

Architecture & Construction

CAREER CLUSTER

Advanced Technologies Academy

Architectural Design

Architecture & Construction Career Cluster

Overview

Students (151)	Percentage
Male	64%
Female	36%
Low-income	51%
Minority	80%
English language learners	20%

The Architectural Design program of study at Advanced Technologies Academy (A-TECH) in the heart of Las Vegas, Nevada was the first program of its kind in the state when it began over 20 years ago. What started off as a cutting-edge Computer Assisted Drafting and Design (CADD) program has expanded to focus on the entirety of the architecture field and better align with university-level architecture programming. While the program of study has evolved and grown over time, it boasts strong roots in providing students with access to world-class mentors, work-based learning opportunities, rigorous academic and technical courses, and the chance to work across career clusters every year.

Rigorous Curriculum Paves Pathway to Future

The first district-wide CADD curriculum was written in 2000 in response to the widespread demand for training that prepared students for careers or further postsecondary education in the construction sector. It quickly became clear that the focus of the program needed to shift to architecture with the increasing emphasis on architecture, engineering and construction careers in Las Vegas. In recent years, the program of study has more closely aligned with curriculum offered at University of Las Vegas and expanded to include courses in 2D and 3D drafting, sustainability, green building and portfolio development. In 2008, the State of Nevada drafted standards for mechanical and architectural drafting, which were in place until 2015, at which point A-TECH worked with the state to develop standards that more closely align with college curriculum and career pathways.

To ensure the program of study is kept relevant and meaningful, A-TECH serves on the Joint Technical Skills Committee with the College of Southern Nevada. The committee is comprised of industry representatives, school district leaders and college personnel. Members of the committee work to determine what the current industry trends are and recommends changes to current curriculum and instructional practices to ensure students are college and career ready.

As part of keeping up-to-date with industry advancements, the curriculum provides ample opportunity for students to earn industry certifications such as Revit and AutoCAD, in addition to dual enrollment credits. College credit is awarded to students based on articulation agreements established by each Nevada college as outlined in a memorandum of understanding. CTE College Credit is free and is awarded to students who complete the CTE course sequence with a grade-point average of 3.0 or higher, pass the state end-of-program technical assessment for the program, and pass the Workplace Readiness Assessment for employability skills.

Real-world Opportunities Prepare Students for the Future

The foundation of all the program enhancements has remained a solid drafting curriculum that teaches the fundamental ideas and concepts necessary to be competitive in the architecture, engineering and construction field. Employers and industry leaders have not only contributed to the curriculum offered, but are also critical in providing real-world learning opportunities to students.

> *[A-TECH] students have been valuable additions to our organization. I've witnessed countless A-TECH Architectural alums go on to work for my clients, move up in those organizations, and a few even run their own firms. In my line of work providing software, training and support to architecture, engineering and construction companies all over Nevada, it's easy to find a fellow alum making an impact in our local business community."* – Joe Schmidt, Vice President, Holman's of Nevada, Inc., A-TECH alumni

While the recession has made formal work-based learning opportunities scarce, A-TECH's advisory board has developed the A-TALK series to bring industry leaders into the classroom to speak to students about their career opportunities in the field. Juniors and seniors benefit from weekly mentoring, and have the chance to job-shadow at local firms.

In addition to hearing from and working with professionals in the industry, students throughout the school are encouraged to take part in four Career and Technical Student Organizations (CTSO). Through their involvement, students compete, hold leadership positions, serve their communities and work with peers and mentors across a variety of Career Clusters on a regular basis.

Students are also able to work across all eight Career Clusters offered at A-TECH on one project every year. Most recently, students came together to create a mock-up of a high-speed train that would span southern California to Nevada. The architecture program designed the trains, while business students developed a business plan, IT students determined how the train would provide internet service to passengers, and marketing students created an advertising strategy.

Success by the Numbers

A rigorous curriculum aligned with postsecondary offerings that is responsive to industry changes, in addition to a variety of real-world learning opportunities, has resulted in all students graduating college and career ready.

92%

Earned Postsecondary Credit

100%

Earned Industry-recognized Credential

100%

Graduated High School

100%

Enrolled in Postsecondary Education and/or entered workplace

Data based on 2014-2015 school year