



Kentucky Advanced Technical College High (Grades 9-12 plus 2)

A top priority for Governor Bevin's Administration is to ensure that Kentucky's employers have the talent necessary to grow their 21st century workforce and that future generations of young Kentuckians have the skills employers need to fill well-paying middle and high demand jobs. KTECH (grades 9-12 plus 2 program) has been created to make this happen.

Under its Kentucky Work Ready Skills Initiative, the state has invested, or committed to invest, more than \$250 million in education and workforce development strategies.

Science, technology, engineering and math (STEM) job occupations will play a large role in the expansion of Kentucky's economy. All are projected to grow in the next five years - with annual incomes above the state's average. In order to prepare young people entering the labor market with the capability to meet the heightening demand for

workers with STEM skills, we need to increase the number of Kentucky's students undertaking STEM studies in high school and in post-secondary school.

Boosting STEM skills is crucial to preparing Kentucky's young people for jobs of the future. Also important are the employability skills that allow them to thrive in the workplace, including listening, communication and problem-solving skills along with teamwork and responsibility. Deep and lasting collaboration between employer partners, schools and community stakeholders will provide Kentucky's young people with a structured, accessible and accelerated pathway from education into employment - while growing pipelines of talented job candidates for Kentucky's employers with knowledge and aptitudes specific to their workplace.

Supported by:



The core elements of KTECH

Long-Term Partnerships

At its core, the KTECH model is about collaboration and shared decision-making between employers, schools and the community - from high school through post-secondary education. And it goes deep with on-the-job training. KTECH is a collaboration with a clear purpose: to provide industry with talented workers specific to employer's needs and to provide young people with a nationally-recognized industry credential, associate's degree and well-honed career pathway.

Links to employment

In-depth interactions between industry, schools and students ensures employers are growing their talent pipelines. KTECH provides employer partners with the ability to work with teachers to align classroom learning to the skills they most need and enables students to become well grounded in industry's latest technologies. Further, with significant on-the-job training alongside classroom learning, students make substantial connections to employers and employment opportunities upon program completion.

Industry Mentoring and Support

KTECH employer partners are investing for the long haul. Not only do they provide on-the-job skill building to fill their talent needs but establish strong mentor relationships

between experienced employees and students. Equally important, only short-term thinkers prioritize technical skills over human development (or employability) skills. Mentors help ensure students' learning stays on track, provide them with guidance on making informed decisions about their career pathways and nurture important critical thinking, leadership and team-building skills along with a strong work ethic.

Innovative Approach to Work-Based Learning

KTECH would not be possible if industry and educators acted in isolation. Through creative sequencing of classroom instruction and on-the-job training, students better understand the relevance and applicability of what they are learning at school to the workplace.

Apprenticeships

Because of the continuity of support and strong collaboration between employers and education, KTECH yields a high school diploma, associate's degree and a nationally recognized industry certification. While the partnership facilitates the seamless transition from high school to college to gainful employment, both knowledge acquisition and knowledge application come together for participants through modern apprenticeships. Modern apprenticeships are a highly structured opportunity to earn while one learns in the 21st century workplace.

How does KTECH work?

- KTECH is grades 9-12 plus 2. Students study traditional high school subjects in combination with an advance learning STEM curriculum - developed with important employer partners.
- Employer partners are intimately involved in the design and delivery of the curriculum at school and on the job - in order to grow talent that meets their specific talent needs. The overarching aim of the KTECH style curriculum is to build both the technical and non-technical skills young people need to succeed in school, to further their education and to excel in the workplace.
- In addition to input into the STEM curriculum, employer partners provide students with opportunities to engage in authentic work-based learning and apprenticeships. In return, employers get highly competent work-ready employees.
- As they progress in the program beyond grade 12, students undertake a more rigorous curriculum of STEM training and a structured apprenticeship in their area of specialization to prepare them for an associate's level degree and a nationally recognized industry credential. As apprentices, program participants earn while they learn.
- The KTECH model matches each student with an industry mentor for the duration of the program and progressively builds opportunities for students to connect their classroom learning to real life situations and applications. Mentors work closely with teachers to help guide students through practical projects and problem solving exercises. This enables students to extend their learning beyond the classroom and build their understanding of the requirements and expectations of the world of work.

How does KTECH differ from other programs?

The most notable and impactful elements of distinction are:

- Significant collaboration and a high level of engagement between employer partners and educators
- Formalized mentorships with industry practitioners
- Clear identification of employee-specific needs and apprentice competencies
- Highly structured on-the-job training through apprenticeships. Students earn while they learn as apprentices; employer partners grow a high quality worker who becomes embedded in company culture and is committed to the employer for the long haul.
- An associate's degree
- A nationally-recognized industry STEM credential
- Seamless career pathway from school to work

Similarities and Differences between KTECH and other Kentucky Efforts

	KTECH	New Skills for Youth (CTE)	Apprenticeship Co-op (Social Service)	Tech Ready Apprentices for Careers in Kentucky (TRACK)
Formalized mentorships and coaching with industry practitioners	•			
Contractual training agreement between parents, school/principal, student, employer, technical training organisation/community college	•			
Strong individual support	•			
Strong career coaching	•	•		•
Clear identification of apprentice and employer-specific competencies	•			
Part-time on-the-job training	•	•		•
Full-time on-the-job training			•	
Core academic skills in high school	•	•		•
Associate's degree from community college	•			
Employability skills	•	•	•	•
Technical job-specific skills	•		•	
Competency-based training (optional)	•	•		
Time-based training	•	•	•	
Curriculum targets local and regional skills shortages	•	•	•	•
Structured on-the-job training with wage	•		•	
Work-based learning internship, no wage	•	•	•	•
Nationally recognized industry-specific apprenticeship certifications and credentials	•		•	
Cross-sector partnerships	•	•		•
Seamless transition from school to work	•			

Committed to growing apprenticeships

While 427 apprentices have completed programs in Kentucky to date,
there are currently 1,336 new apprentices on board.
A total of 3,339 apprentices are currently working their program.

The triple bottom line for employers and Kentucky's young people

The cumulative impact of KTECH's elements is threefold.

1. Enables students to graduate with a skills profile aligned with employers' greatest or unmet needs.
2. Provides a clear pathway to employment opportunities with a local KTECH industry partner or within Kentucky's rapidly expanding workforce.
3. Builds a significant pipeline of highly skilled workers for Kentucky's high-growth industries.



This initiative is funded by the United States
Department of Education under the
Pathways to STEM Apprenticeship for High
School Career and Technical Education
Students Grant.