

# NEW!

## Advanced Manufacturing Curriculum from Intelitek for NAF Academies



BE FUTURE READY

*"Advanced Manufacturing is a modern method of production, incorporating highly automated and sophisticated computerized design and operational systems. Advanced Manufacturing delivers higher quality products at lower cost within the shortest delivery time."*

[naseni.org](http://naseni.org), 2017



### About the Advanced Manufacturing Program

#### Multi-Year High School Manufacturing Curriculum

Intelitek, together with NAF, is providing students with a comprehensive two to four year advanced manufacturing program that integrates work projects, competitions, and apprenticeships, guaranteeing qualified graduates.

By offering the Advanced Manufacturing program, NAF academies address the acute need for workers to fill 21st century jobs - who are qualified, tech literate, and have manufacturing and production knowledge. The program prepares high school students by providing them with the technical skills, as well as a full appreciation of the manufacturing ecosystem, so they can pursue opportunities in this growing sector.

The partnership was launched in 2017, through a collaboration between NAF, Cimarron Memorial High School in Las Vegas, Nevada, and Intelitek, as a pilot to provide students across the nation with access to a program that will create economic opportunity and enable more students of all backgrounds to succeed in STEM careers. Three pilot schools in Nevada initiated the two-year plan that will steer students into higher-paying and in-demand professions in the state.

The curricula, developed by Intelitek, are aligned to the Nevada State Assessment for Manufacturing Technologies. Students also takes advantage of the projects created by Intelitek for the SkillsUSA Advanced Manufacturing and Robotics & Automation competitions, and can compete at the State or National level.

### Built to Develop Career Readiness

Advanced Manufacturing is a job readiness focused program – the series of curricula are designed not only to teach STEM skills, but also to address the soft skills required to succeed that are critical for young candidates in new jobs.

STEM skills and knowledge are the fundamental element of the Advanced Manufacturing Program. In addition to science, technology, engineering, and mathematics, students gain a broad understanding of the business of manufacturing and learn about teamwork, communications, quality control, documentation, leadership, and ethics.

The focus of the content is driven by input from industry - business partners collaborating with educators to frame the primary skills they expect out of new employees that make them employable.

### Transforming the American High School Experience:

- STEM workers earn as much as 26% more than others and command higher salaries.
- Employment in STEM is projected to grow 17% between 2012 and 2022. There will be 9 million STEM jobs by 2022.

intelitek 

# Delivered as robust and relevant STEM education in a format that engages digitally-native students



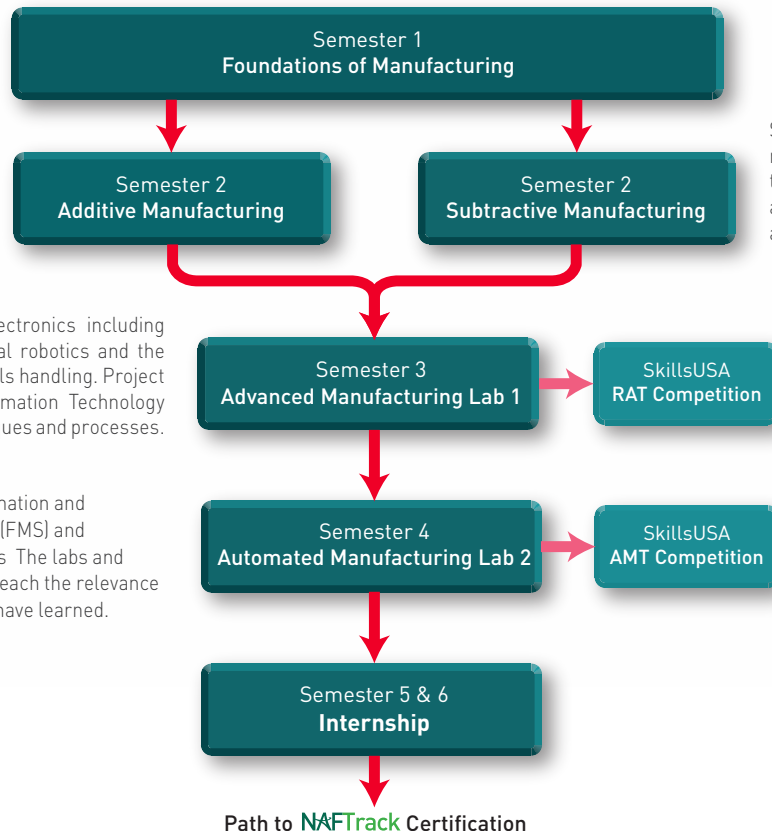
## High-Quality, Standards-Based Curriculum

STEM skills and knowledge are a key element of the Advanced Manufacturing curricula for NAF academies. This multi-year program mixes theory, hands-on, and practical studies into a well-rounded program incorporating skills-based curricula and e-Learning, industrial applications, advanced simulations, hands-on industry like educational hardware, and project based learning.

Study the design process, techniques and tools for digital 3D design (CAD) used in programming and designing of prototypes and products with additive techniques like 3-D printing, rapid prototyping, and plastics manufacturing.

Introduction to hands-on electrical and electronics including control systems and motors. Study industrial robotics and the integration of tools and processes for materials handling. Projects include the SkillsUSA Robotics and Automation Technology projects combining the manufacturing techniques and processes.

Starting with in depth study of PLCs and automation and advancing to Flexible Manufacturing Systems (FMS) and Computer Integrated Manufacturing (CIM) labs. The labs and SkillsUSA Automated Manufacturing Project teach the relevance of real-world production processes students have learned.



Study the concepts of design and manufacturing using subtractive machining techniques and tools like milling, routing, and turning. Understand the differences and advantages of the production methods.

### Path to NAFTrack Certification

Graduates who complete the assessment of the coursework, projects and internship benefit from the NAFTrack Certification and will be in a preferred position to fill the many open positions in local industry.

## About NAF

Founded in 1982, NAF supports a national network of academies across the country focusing on growing industries and ensuring high school students are college, career, and future ready.

NAF's educational design ignites students' passion for learning by transforming the learning environment to include industry-specific curricula and work-based learning experiences, including internships.

NAF partners with existing high schools in high-need communities to enhance school systems at a low cost by implementing NAF academies – small learning communities within traditional high schools.

During the 2016-17 school year nearly 100,000 students attended 675 NAF academies across 36 states.

## NAFTrack Certification

Participants in a NAF academy program can achieve NAFTrack Certification if they pass the rigorous and comprehensive assessment system that evaluates students on the career-related coursework and internship performance.

NAFTrack Certification signifies to post-secondary institutions and employers that high school students are both college and career ready.

Students then benefit from the myNAFTrack network as well as NAFTrack Certified Hiring where they are recognized amongst the large pool of candidates as having unique qualifications from NAF.

NAFTrack Partner Employers benefit by gaining a competitive edge over other companies through direct access to certified, highly skilled talent as interns and later full time employees.

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