

## **BACKGROUND OF PROGRAMMING IN BHM SCHOOLS**

For the 2025–2026 school year, the Technology Education program in BHM Schools provides coursework for students in grades 8–12. Unfortunately, due to staff reductions in the past few years it has limited our department’s ability to offer a wider variety of course options at both the high school and middle school. At Buffalo Community Middle School (BCMS), Technology Education courses are offered to students in 8th grade only including a required Technology Education 8 course and 2 elective offerings of Woodworking and Transportation Technology. The Technology Ed 8 middle school course has evolved from a traditional manufacturing focus to an engineering-based curriculum that emphasizes the informed design process, problem solving, and critical thinking skills. While the Technology Ed 8 program has shifted toward engineering and design, two traditional electives continue to be offered to provide students with hands-on fabrication experiences.

At Buffalo High School (BHS), all Technology Education courses are elective-based. With the exception of a few courses, Technology Education offerings are structured as single-term classes, allowing students maximum flexibility when building their academic schedules. The high school program offers a broad range of courses, spanning traditional areas such as woodworking and metals, as well as high-technology courses including three-dimensional computer-aided drafting (3D CAD) and robotics.

The BHS Technology Education Department has been affiliated with St. Cloud State University since 2006, offering a College in the Schools (CIS) course. Along with being affiliated with St. Cloud, the Technology Education department has been in coordination with Hennepin Technical College (HTC) since 2008 offering college credit in Engineering, CAD, and Auto Service and Maintenance. Significant growth and facility improvements have occurred over time. In 2005, expanded instructional spaces were added, including a traditional metals shop used for metals instruction and auto maintenance. That same year, a dedicated computer lab was established to support Introduction to CAD and two advanced 3D CAD courses—one mechanical and one architectural. Additional improvements include the reorganization of the Technology Lab in 2024, into a multi-use classroom for Robotics, Energy and Power, and Auto Engineering. Also in the 2024-2025 school year, BHS started an Intro to Construction class without a truly dedicated building space and classroom.

Despite these improvements, the Technology Education program has not fully kept pace with the rapid advancement of modern technologies. Financial constraints and limited instructional space remain the primary barriers to program expansion. As the department moves into the 2026–2027 school year, it continues to seek solutions that will allow students to explore a broader range of current and emerging technologies.

## **PROGRAM STANDARDS**

The Technology Education program aligns with the International Technology and Engineering Educators Association (ITEEA) Standards for Technological Literacy for grades K–12. Currently, the BHM Technology Education program in grades 8–12 addresses 18 of the 20 established benchmarks. The two benchmarks not addressed are medical technologies and agricultural technologies. While not all benchmarks are fully mastered within the program, many are introduced and reinforced throughout the coursework.

## **PROGRAM VISION STATEMENT**

“Empowering individuals to achieve their full potential by providing innovative, hands-on learning experiences that bridge education and industry, foster lifelong career success, and cultivate a skilled, adaptable workforce for the future.”

## **SUMMARY OF PROCESS FOR REVIEW OF INSTRUCTIONAL RESOURCES**

The goal of the Technology Education Department at BHM Schools is to provide students with meaningful opportunities to explore a wide range of career pathways and essential life skills throughout their educational experience. The department offers diverse content areas in communications, energy, power, and transportation, and manufacturing systems.

To support this goal, the department emphasizes exploratory learning experiences that expose students to a variety of technologies, including:

- Computer-aided drafting (CAD)
- Computer-operated machining equipment
- Laser engraving and cutting
- Robotics
- Woodworking
- Metal working
- Engineering

As technology continues to evolve, the department is committed to maintaining alignment with current industry trends and best practices in Technology Education. The ultimate objective is for students to graduate with sufficient knowledge and experience to make well-informed decisions about postsecondary education, careers, and life pathways.

## **RECOMMENDATIONS**

For the 2026–2027 school year and beyond, the BHM Technology Education Department recommends expanding student access to current and emerging technologies, including:

- GTAW / TIG welding
- Powder Coating
- Current robotic technology
- Drone technology
- Laser Engraving

At present, access to these technologies is limited by equipment availability. Buffalo High School currently has two 3D printers and two laser engravers, which is insufficient to meet

student demand. Buffalo Community Middle School faces similar limitations, with only 2 3D printers and no laser engraver available for instruction.

## **FINANCIAL IMPLICATIONS**

[K-12 Spreadsheet template for requests](#)

The 2025-2026 Technology Education Curriculum Adoption Proposal consists of \$25,764.00 at BCMS and \$104,146.56 at BHS for a district total of \$129,910.56.

## **EVALUATION**

The evaluation of the curriculum adoption will be monitored through multiple measures to determine whether the selected materials are having the intended impact. Anticipated outcomes include increased enrollment in Technology Education courses, improved student engagement in technology-based learning, and greater mastery of the Standards for Technological Literacy. In addition, students are expected to demonstrate improved application of mathematical skills, including measurement, scaling, and spatial reasoning.

## **NEXT STEPS**

Upon board approval, the Teaching and Learning Department will initiate the purchase of recommended instructional resources. Technology Education teachers will participate in professional development and training to ensure effective use of new equipment. In addition, staff will engage in curriculum writing and district curriculum mapping to align instructional resources with updated curriculum goals for the 2026–2027 school year.