You are invited to explore our dynamic collaborative learning experience
About Tech Valley High School

Tech Valley High School, a public high school that is built on the principle of project-based learning and collaboration, is open to all students. That means students learn in hands-on projects based in real-world applications of Common Core subjects.

Located on the campus of the Colleges of Nanoscale Science and Engineering (CNSE) at SUNY Polytechnic Institute, TVHS is uniquely situated to provide access to technology resources and partnerships students need to excel in the global economy.

The school partners with business leaders throughout the region to incorporate true-to-life experience into student learning.

In the heart of the region’s fast-growing technology sector, TVHS exposes students to aspects of the global economy while building on its mission of developing 21st century skills while meeting New York state learning standards.

TVHS is...

... a small school. TVHS currently serves approximately 140 students across four grades.

... free to all students. TVHS is a regional public high school supported by area schools, businesses and the state.

... project-based. Every subject is taught through project-based learning that engages students in every facet of their education.

... designed for collaboration. Break-out space was built into the TVHS facility with collaboration in mind. Whiteboards, projectors and monitors are found in every classroom, hallway and foyer.

... student-centered. TVHS students take an active role in their own education, working with teachers in a professional collaborative environment built on two-way communication.

... built with partners. Dozens of higher education and business partners volunteer in the school and host students for learning opportunities alongside experts.

... technology-focused. TVHS students are provided with laptops and wireless presentation technology is integrated into each classroom and break-out space.

“Self-direction, research, collaboration and communication – skills like the ones you learn at Tech Valley – are the skills that help you succeed.”

Andreea Musteata, TVHS junior

Top left, TVHS students practice essential chemistry lab skills in advance of fieldwork in emerging technologies with area businesses. Above, students participate in Design and Build Club, an example of a “Club Day” activity in which students explore their interests with one another in student-led clubs each Friday.
Why choose TVHS?

Why choose Tech Valley High School (TVHS)?

- Tech Valley High School is located on the campus of the Colleges of Nanoscale Science and Engineering (CNSE) at SUNY Polytechnic Institute, a world-class global research and development center, a $20 billion facility with 3,500 scientists, researchers, engineers, professionals, college students and faculty.

- Tech Valley High School focuses its education on teaching skills identified by higher education and business leaders as crucial to the 21st century economy. Students’ grades reflect how well they are able to demonstrate these learning outcomes in each project.

- The curriculum at TVHS meets all NYS requirements with lessons taught through project-based learning.

- According to the U.S. Department of Commerce’s Economics and Statistics Administration, STEM occupations are projected to grow by 17 percent from 2008 to 2018, compared to 9.8 percent growth for non-STEM occupations. Workers in STEM fields command higher wages, earning 26 percent more than their non-STEM counterparts.

“To succeed today, you must adapt to lifelong learning. Your education at Tech Valley High has prepared you to be successful.”

Alain Kaloyeros, Ph.D.,
Chief Executive Officer,
Colleges of Nanoscale Science and Engineering at SUNY Polytechnic Institute

Core LEARNING OUTCOMES at TVHS

Collaboration
Content Literacy
Communications
Technology Literacy
Knowing and Thinking
Agency/Self-Direction

Quick TVHS Facts...

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The distinctive environment at Tech Valley High School revolves around project-based learning (PBL) and inspires exploration, discovery and a passion for learning. Students meet graduation requirements through an education based in real-world projects, teamwork and interacting with business and community partners.

**The role of technology**

With a one-to-one student-to-networked-computer ratio, students learn both with and from technology. A focus on emerging technologies serves as a teaching tool and local technology experts partner with teachers to create innovative projects.

**Integrated curriculum**

Several classes are integrated at TVHS. For example, Global Humanities is a course in freshman and sophomore years that integrates global history and English. Students may also study biology and chemistry in a course called Bio-Chemistry. Sophomore English and American history are combined in a course called Inventing America and Economics, Entrepreneurship, Emerging Technology and Quantitative Analysis (E3Q) satisfy requirements in economics and government.

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<tr>
<th>Sample class offerings at TVHS</th>
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<tr>
<td><strong>Freshman year:</strong></td>
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<tr>
<td>Algebra</td>
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<tr>
<td>Bioengineering (Living</td>
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<tr>
<td>Environment and Engineering)</td>
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<tr>
<td>Global Humanities (Global</td>
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<td>History and ELA 9)</td>
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<tr>
<td>Chinese</td>
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<tr>
<td>PE/Kinesiology</td>
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<td><strong>Grade 10 and beyond:</strong></td>
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<tr>
<td>Computer Science</td>
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<tr>
<td>Economics</td>
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<tr>
<td>Environmental Science</td>
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<td>Geometry</td>
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<td>Inventing America</td>
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<tr>
<td>Pre-Calculus and Calculus</td>
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<tr>
<td>Trigonometry</td>
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Electives during students’ junior and senior years include a variety of online high school courses and college courses available through University in the High School.

**Studies show adolescents learn best when they:**

- Are faced with solving unforeseen problems and meeting unpredicted obstacles.
- Work collaboratively on team-based projects.
- Take responsibility for their own learning.
- See how what they are learning fits into their future.

The learning environment at TVHS revolves around these concepts and allows students to master the subjects necessary to meet the rigorous requirements of working in a technology-rich and intellectually complex world.

**21st century skills**

TVHS focuses its curriculum on the skills students need to succeed in a global, ever-changing world, including:

- Taking initiative and becoming “lifelong learners.”
- Working successfully on a team.
- Taking personal responsibility for work and learning.
- Managing and planning short- and long-term goals.
- Presenting and defending project results.

**Project-based learning and academic rigor**

TVHS students are thoroughly immersed in PBL, which brings together intellectual inquiry, rigorous real-world standards and student engagement in relevant, meaningful work.
What are the RESULTS of learning at TVHS?

Projects make the difference at TVHS. Through projects, students achieve learning outcomes that prepare them with the knowledge and skills necessary to achieve success. The practical applications allow students to understand Common Core concepts through real-world work.

Real-world data analysis

Projects at Tech Valley High School integrate real-world scenarios and information wherever possible.

For example, in Environmental Analysis, students are as likely to be found in the field gathering data as they are in the classroom analyzing it.

Each year, students go to the Hudson River where they gather water samples to analyze against historic data collected by previous TVHS classes and other schools.

Learning with experts from the field

The centerpiece of the Tech Valley High School learning experience is the school’s unparalleled partnership with the business community and the opportunities that this affords students. Collaboration with experts in the emerging technologies community both enhance and expand the school’s curriculum and activities.

Through these partnerships, TVHS students learn how the knowledge and 21st century skills they are being taught is applied in a variety of “real world” situations and settings.

“Through every hard time and failure I had at TVHS, I learned and became more confident in myself.”

Savanah Beers, TVHS Class of 2013

Students as the teachers

Tech Valley High’s education is centered on the students, who drive their own learning. In many cases, projects put students into the teacher’s role.

In one bioengineering project, students design and build their own microscopes that they then use to study cell structures. They spend weeks preparing lessons, presentations, activities and samples to teach what they have learned.

The project culminates when young students from around the region come to TVHS to learn. The bioengineering students demonstrate their knowledge of the project’s content while communicating it to younger students.
What else makes TVHS successful?

Advisories
Weekly advisories provide students, Grade 9-12, the opportunity to develop a close relationship with a consistent group of 10 to 12 peers and a teacher. Students’ advisory teachers, who know their students well, are the main contacts for parents.

Individual investigations “in the field”
Every year, students at TVHS undertake an I-Term project during the month of February that allows them to take a “deep dive” into an area they find interesting.

Freshmen and sophomores take on individual research projects that prepare them for their junior year, when they spend 15 to 25 hours working side-by-side off-site with engineers, doctors, researchers, executives, and other professionals.

I-Term culminates with the Senior Project, a TVHS graduation requirement. Seniors showcase their work with peers, teachers and experts from the field.

College credits
Earning college credits is strongly encouraged. Students can take college-equivalent classes at TVHS, enroll in online courses, participate with Virtual AP® coursework, or attend classes at a nearby college.

Partnership with the New Tech Network
New Tech Network provides a national model of project-based learning in a technology-rich environment. TVHS was the first school to adopt this model in New York state. The partnership allows the school to access NTN resources to help shape the program, curriculum and school culture. (Please visit NewTechNetwork.org for more information)

School-wide student learning outcomes
Students are assessed by more than just a number or letter grade; they are also evaluated based on self-direction, core content knowledge, collaboration, presentation skills, written work and critical thinking. This system provides a full understanding of students’ strengths and target areas for growth and gives parents and teachers guidance in tailoring each student’s individual academic program.

Community service
Community service is required to connect students to the world around them and provide them with an opportunity to learn important skills and ethics.

“Tech Valley has given me many of the necessary skills needed in order to be successful in college and in the real world.”
Andrew Glanton
TVHS Class of 2015

Above, a TVHS biochemistry student uses soldering tools to build a semiconductor device known as a thermistor. Students on the right are taking a math class at one of the school’s many “break-out spaces.” The spaces spread throughout the school are designed to accommodate small group work or small classes and, like the classrooms, are equipped with whiteboard space and projection equipment.
Did you know?

- Interested students apply in eighth grade and are selected by lottery.
- Tech Valley High School draws from the 45 public school districts of Questar III and Capital Region BOCES.
- All courses at TVHS are rigorous, integrated and students earn at least 22 high school credits.
- Students earn a Regents Diploma or Advanced Regents Diploma from their home district.
- Students may participate in sports, clubs, dances and other extra-curricular activities in their home districts.
- Students must still meet all New York State learning requirements – the same as all other public high schools in the region.
- The education at TVHS is enriched by the school’s partnerships with area businesses and institutions of higher learning.

Did you know?

TVHS is looking for students who are CURIOUS about a STEM education, WILLING to take on a challenge and OPEN to a new way of learning.

Tech Valley High School offers a challenging, creative experience for students who are interested in being in the driver’s seat of their own education.

TVHS students need to be open-minded and ready to work with business leaders, teachers and other students in a professional, collaborative learning environment.

Students need to be eager to explore a new way of learning and prepared to be “under the microscope” with frequent visits by people interested in this innovative school.

Check out what Tech Valley High School has to offer at one of its numerous Information Sessions or visit online at TechValleyHigh.org.

Tech Valley High School, Questar III and the Capital Region BOCES do not discriminate on the basis of race, color, national origin, sex, disability, or age in programs, activities, employment, and admissions; and provide equal access to the Boy Scouts and other designated youth groups.

The following person has been designated to handle inquiries regarding the non-discrimination policies: Robert Zordan, compliance officer/ coordinator, at robert.zordan@neric.org, (518) 862-4910 or 900 Watervliet-Shaker Road, Albany, NY 12205. Inquiries concerning the application of the Capital Region BOCES non-discrimination policies may also be referred to the U.S. Department of Education, Office for Civil Rights (OCR), 32 Old Slip, 26th Floor, New York, NY 10005, telephone (646) 428-3800 (voice) or (800) 877-8339 (TTY).
For more information, please visit our website at www.techvalleyhigh.org.
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