



Thomas Jefferson High School for Science and Technology 2020 2021

A GOVERNOR'S REGIONAL SCHOOL FOR SCIENCE AND TECHNOLOGY

6560 BRADDOCK ROAD, ALEXANDRIA, VIRGINIA 22312 | PHONE 703 750 8300 | FAX 703 750 5010
tjhsst.fcps.edu

UNIQUE MISSION & BELIEFS

Mission Statement

The mission of Thomas Jefferson High School for Science and Technology is to provide students a challenging learning environment focused on math, science, and technology, to inspire joy at the prospect of discovery, and to foster a culture of innovation based on ethical behavior and the shared interests of humanity.

Beliefs Statement

At Thomas Jefferson High School for Science and Technology, we believe:

1. Critical thinking and problem solving skills are vital in addressing the complex societal and ethical issues of our time.
2. Students learn best in a community where academic disciplines are integrated, fostering an appreciation of how they interact and form a whole.
3. Global interdependence compels us to understand the languages, systems and diverse cultures of people throughout the world.
4. Literature, music and the arts are essential, timeless aspects of human existence.
5. The methods of science provide discipline to our search for structure in the world.
6. Research stems from a combination of fundamental knowledge, individual creativity and curiosity.
7. Effective communication is often the only difference between a good idea and a successful initiative.
8. Collaborative learning, athletics, and extracurricular activities develop leadership and interpersonal skills.
9. Responsibility and integrity are core principles in the pursuit of excellence.
10. Learning never ends.

About Us

Ann Bonitatibus, Principal

Brandon Kosatka, Director of Student Services

Thomas Jefferson High School for Science and Technology (TJHSST) is the product of a partnership forged between the business community and Fairfax County Public Schools (FCPS) to improve education in science, mathematics, and technology. This unique FCPS school offers a comprehensive program that focuses on scientific, mathematical, and technological fields. The core skills and values infused throughout the curriculum emphasize and promote critical inquiry and research, problem solving skills, intellectual curiosity, and social responsibility. As the regional Governor's School for Science and Technology in Northern Virginia, the school serves applicants from five participating school districts: Arlington, Fairfax, Loudoun, and Prince William counties, as well as Falls Church City. Of the 436 students in the Class of 2021, 130 are National Merit Semifinalists, and an additional 230 are National Merit Commended students.

Admissions

The admissions process is independently run by FCPS and the TJHSST Admissions Office. Students are selected based on their academic achievements, as well as their passion and aptitude for studies in the scientific, mathematical and technological fields. Each year, approximately 500 students are offered admission to the incoming 9th grade class. The Class of 2024 admissions cycle offered enrollment to 486 of 2539 applicants.

Enrollment

Total enrollment for the 2020-2021 school year is 1809 students.

Currently, our grade level distribution and enrollment are as follows:

9th Grade	(Class of 2024) - 453 Students
10th Grade	(Class of 2023) - 466 Students
11th Grade	(Class of 2022) - 454 Students
12th Grade	(Class of 2021) - 436 Students

Student Research

Since its very first graduating class in 1985, student research has played an essential role in learning at TJHSST. Graduation requirements include the completion of an original engineering or experimental research project in one of thirteen on-campus laboratories listed below or off-site through a mentorship program at a corporate, government, or university research laboratory.

- Astronomy and Astrophysics
- Automation and Robotics
- Biotechnology
- Chemical Analysis and Nanochemistry
- Computer Systems
- Engineering Design
- Energy Systems
- Microelectronics
- Mobile & Web Application Development
- Neuroscience
- Oceanography/Geophysical Systems
- Quantum Physics and Optics
- Prototyping and Engineering Materials

Selected outstanding research projects are published in TJHSST's annual student-produced research journal, TEKNOS, which has won numerous national awards.

Embedded Activities Period

In addition to the seven academic periods, students are required to participate in an activities period that is included in the instructional day. Affectionately referred to as "8th period", this additional class period of the day affords students the ability to seek out academic support and/or enrichment while also providing them the opportunity to participate in any of the over 150 clubs and activities exploring (but not limited to) diversity, academic competition, outreach, service, and more.

Accelerated Curriculum

The rigorous college preparatory curriculum provides students with the opportunity to achieve in all disciplines, with an emphasis on the sciences and the technology of applied sciences. All students are required to work toward a 26 credit Thomas Jefferson High School Diploma that parallels the Virginia state requirements for its Advanced Studies Diploma of 26 credits.

English	4
Mathematics (not including Algebra 1; AP Calculus required)	4
Science (Biology, Chemistry, Physics, and Geosystems)	4
Social Studies	4
World Language (in the same language)	3
Health and Physical Education	2
Fine Arts/Sci-Tech Elective/Cultural Studies	2
Science/Technology Research	1
Computer Science	1
Economics & Personal Finance	1

26 credits

TJHSST CEEB Code: 470054



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ADVANCED PLACEMENT AND BEYOND

ADVANCED PLACEMENT COURSES OFFERED

English Lang/Lit	Micro/Macro Economics	Chinese
Chemistry	Biology	U.S. Government
Psychology	United States History	Physics C
French Language	Russian	European History
Calculus AB & BC	Computer Science A	German
Music Theory	Japanese	Statistics
Latin Vergil	Spanish Lang/Lit	Studio Art
Art History		

** In 2020, 3745 AP Exams were taken by TJHSST students; over 96 percent of exams earned a score of 3, 4, or 5.

POST-ADVANCED PLACEMENT COURSES OFFERED

(courses that have AP courses as a prerequisite):

Multivariable Calculus	Electrodynamics
Linear Algebra	Neurobiology
Differential Equations Complex Variables	Intro to Organic Chemistry
Probability Theory	Artificial Intelligence 1 & 2
Concrete Math	Parallel Computing 1 & 2
Advanced Math Techniques	Computer Vision 1 & 2
	Mobile/Web Applications
	Machine Learning 1 & 2

FCPS Grading Scale

"Excellent"	A	93 – 100	(4.0)
	A-	90 – 92	(3.7)
	B+	87 – 89	(3.3)
"Above Average"	B	83 – 86	(3.0)
	B-	80 – 82	(2.7)
	C+	77 – 79	(2.3)
"Average"	C	73 – 76	(2.0)
	C-	70 – 72	(1.7)
	D+	67 – 69	(1.3)
"Below Average"	D	64 – 66	(1.0)
"Failure"	F	below 64	(0.0)

Weighting:

- Honors courses are weighted with an additional 0.50 quality points.
- AP Courses receive an additional 1.0 weight for year-long courses.
- Selected post-AP courses (semester courses that require completion of an AP course prior to enrolling) receive additional weighting as well.

College Board SAT Scores (Class of 2019)

	Mathematics	Critical Reading
TJHSST	781	734
FCPS	612	606
Virginia	551	567
National	528	531

ACT Scores (Class of 2019)

	Composite Score
TJHSST	34.4
FCPS	26.5
Virginia	23.9
National	20.6

The scores represent the national and state averages for public school students in the class of 2019 reported by the College Board and ACT. The FCPS score averages reflect an additional analysis inclusive of those students enrolled in June of 2019.

FCPS Profile: <https://www.fcps.edu/about-fcps/performance-and-accountability/fcps-postsecondary-profile>

Class Rank and Grade Point Average

Class rank is **not** computed or estimated in FCPS or at TJHSST. The Class of 2020 Final Grade Point Averages (after 8th semester) ranged from 3.336 to 4.631.

Grade point average (GPA) is calculated on the basis of all high school courses for which credit has been earned, attempted, and previously awarded. High school courses taken in middle school may be expunged from the high school transcript.

Class of 2020 College Acceptance List

Through an annual survey of all seniors, 99 percent of TJHSST students in the class of 2020 reported they would be attending a four-year college or university as their post secondary plan intention.

The list of schools below reflects the most popular colleges or universities to where TJHSST students in the Class of 2020 were accepted.

University of Virginia-Main Campus
William and Mary
George Mason University
University of Pittsburgh-Pittsburgh Campus
Virginia Polytechnic Institute and State University
University of Michigan-Ann Arbor
University of Maryland-College Park
Virginia Commonwealth University
Purdue University-Main Campus
Pennsylvania State University-Main Campus
University of Illinois at Urbana-Champaign
Georgia Institute of Technology-Main Campus
Carnegie Mellon University
New York University
Case Western Reserve University
University of North Carolina at Chapel Hill
Rochester Institute of Technology
University of California, San Diego
Cornell University
James Madison University

Student Disciplinary Infractions

It is the student's responsibility to disclose discipline infractions to postsecondary institutions. FCPS does not disclose students' disciplinary information without express written consent from the parent or guardian or eligible student.

FCPS and TJHSST are accredited by the Virginia State Board of Education and the Southern Association of Colleges and Schools.

COVID-19 Information:

During the Spring 2020, FCPS school buildings were closed from March 13 to the end of the school year, and students were provided with both synchronous and asynchronous distance learning. Students were awarded final grades equivalent to their semester grade or one grade bump higher than their semester grade (B to a B+) based on their level of engagement and mastery of subject matter. For detailed information on how year-long and semester course final grades were calculated during the Spring 2020 closure, as well as other COVID-19 related closure information, please visit the [FCPS Postsecondary Profile](#).

FCPS has opened schools virtually for the 2020-21 School Year. Students receive virtual instruction 5 days per week, including 4 days of live, face-to-face online instruction with teachers and one day of independent, asynchronous learning. Each class is 80 minutes in length. Student attendance is required and all students will receive assignments that will be graded.