



Thomas Jefferson High School for Science and Technology 2021-2022

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

Sara Genetin-Pilawa, 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 451 students in the Class of 2022, 144 are National Merit Semifinalists, and an additional 230 are National Merit Commended students.

Admissions

Through a competitive admissions process that selects students based upon their demonstrated aptitude and passion for studies in the scientific, mathematical, and technological fields, the TJHSST Admissions Office evaluates and considers prospective 9th grade students' honors level coursework in math and science, plus one additional honors course, and academic achievement with a 3.5 minimum GPA. Applications are reviewed by independent selection committees composed of school administrators, counselors, and teachers from schools within the participating school districts.

Each year, approximately 550 students are offered admission to the incoming 9th grade class. The Class of 2025 admissions cycle offered enrollment to 550 of 3,034 applicants.

Enrollment

Total enrollment for the 2021-2022 school year is 1903 students.

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

| | |
|------------|--------------------------------|
| 9th Grade | (Class of 2025) - 541 Students |
| 10th Grade | (Class of 2024) - 450 Students |
| 11th Grade | (Class of 2023) - 461 Students |
| 12th Grade | (Class of 2022) - 451 Students |

Student Research

Since its very first graduating class in 1985, student research has played an essential role in learning at TJHSST. Requirements for the Thomas Jefferson High School Diploma include the completion of an original engineering or experimental research project in one of thirteen on-campus laboratories 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

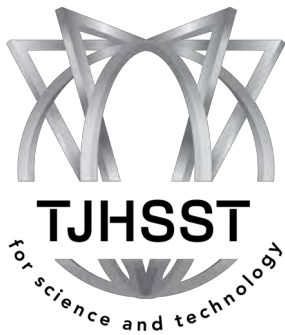
In addition to the seven academic periods, students are required to participate in an activities period that is included in the instructional day. Affectionately referred to as "8th period", this additional class period of the day affords students the ability to seek out academic support and/or enrichment 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 |
| Total | 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 2021, 3554 AP Exams were taken by TJHSST students;
94.9 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) |
| | D | 64 – 66 | (1.0) |
| "Below Average" | F | 50 - 63 | (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.

Grading Policy Changes Affecting the 2020-21 School Year

To provide increased flexibility to students and ensure they were not penalized by the challenges of distance learning, FCPS made the following changes to the high school grading policy for the 2020-21 school year only. These changes were announced in March of 2021. They included:

- Use of No Mark (NM) instead of F grades for all courses. No credit was awarded, and the course was not factored into the student's grade point average (GPA).
- Students/families could choose a mark of "P" (pass) instead of passing letter grades as their final mark in up to two current high school courses. Students had the opportunity to choose this through fourth quarter. This flexibility is in addition to the allowances for designating courses as pass/fail at the beginning of the school year. Therefore, a student's transcript may include more marks of "P" than typically seen on an FCPS transcript.

Additional information can be found on the Secondary Grading and Reporting website at <https://www.fcps.edu/academics/grading-and-reporting/secondary>

Class Rank and Grade Point Average

Class rank is **not** computed or estimated in FCPS or at TJHSST. The Class of 2021 Final Grade Point Averages (after 8th semester) ranged from **3.217 to 4.622**.

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 2021 College Acceptance List

Through an annual survey of all seniors, 99 percent of TJHSST students in the class of 2021 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 where 6 or more TJHSST students in the Class of 2021 were accepted.

| | |
|--|---|
| Duke University | Purdue University-Main Campus |
| Harvard University | University of Illinois at Urbana-Champaign |
| Pennsylvania State University-Main Campus | Carnegie Mellon University |
| The University of Texas at Austin | Cornell University |
| Georgetown University | University of Chicago |
| Massachusetts Institute of Technology | Virginia Polytechnic Institute and State University |
| Virginia Commonwealth University | University of Maryland-College Park |
| University of California-Berkeley | University of Michigan-Ann Arbor |
| University of Pittsburgh-Pittsburgh Campus | University of Virginia-Main Campus |
| George Mason University | College of William and Mary |

College Board SAT Scores (Class of 2020)

| | Mathematics | Critical Reading |
|----------|-------------|------------------|
| TJHSST | 782 | 746 |
| FCPS | 607 | 604 |
| Virginia | 549 | 567 |
| National | 523 | 528 |

ACT Scores (Class of 2020)

| | Composite Score |
|----------|-----------------|
| TJHSST | 34.5 |
| FCPS | 26.8 |
| Virginia | 24.4 |
| National | 20.6 |

The scores represent the national and state averages for public school students in the class of 2020 reported by the College Board and ACT. The FCPS score averages reflect an additional analysis inclusive of those students enrolled in June of 2020.

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

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

See FCPS Profile for Information about High School Attendance, Grading, and Reporting* during COVID-19 Closure Spring 2020

*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.