The Techtonian Way

Your guide to success in

the classroom,

extracurricular activities,

and in the community at Tech.

Skill – Knowledge – Power to Engineer Your Future

## Contents

What does it mean to be a Techtonian?

We are a family that celebrates the diversity of all of our members with a culture of care. We believe that students, teachers, and parents are all active partners in teaching and learning. Every student is a distinct individual whose learning needs must be addressed with tailored instruction to bring success through positive achievements.

The seeds of intellectual and academic excellence are cultivated in the fertile soil of personal responsibility, discipline, and character to reach their full potential.

So what does this mean?

We Value:

GROWTH – both socially and academically

RESPECT & CARE – attitude

COMMUNITY SERVICE – TECH!

WELCOME TO THE TECH NATION FAMLY
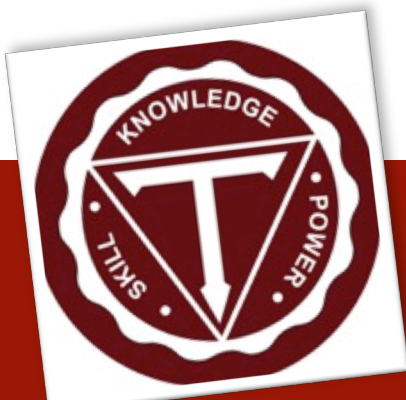
Welcome to the Tech Success Guide. This is your guide for how to excel during your Tech experience. It is intended to help you understand the process of success and to clarify that success can be had by everyone!

Wellness & Growth Mindset

A growth mindset is the belief that intelligence can be developed. Students with a growth mindset understand they can get smarter through hard work, the use of effective strategies, and help from others when needed.

A growth mindset isn't just about getting better at math or coping with a bad grade. It can protect against some of the harmful effects of stress. Using past mistakes as learning experiences can result in better relationships with others, and more confidence in the ability to handle challenges.

PUT IT INTO PRACTICE

When you find yourself dwelling on a negative situation, ask yourself how it can contribute to your goals and how you can learn from the situation. What lessons can you take from what happened? This can be the starting point for taking a new direction. Persevering through challenges by not giving up is a great start to achieving a growth mindset.

Avoid Stress Overload & Burnout!

If stress is negatively impacting your relationships, your health, your school work, your life…You can do something to reduce your stress and get back to a healthy lifestyle! In addition to adapting a growth mindset, make sure you are eating healthy and sleeping at least 8 hours a night.

One plan can include…Talking with your parents, your counselor, or another trusted adult. Don't be afraid to reach out and talk to any faculty member, they are there to support you!

SIGNS OF STRESS OVERLOAD: If you experience any of these, don't hesitate to talk to someone!

Concentration and memory issues, Generally negative attitudes or thoughts, Feeling overwhelmed or moody, Irritability, Inability to relax, Changes in appetite, Sleeping too much or too little, Procrastinating or neglecting responsibility, Muscle tension, Weakened immune system, Frequent headaches or stomachaches

Academics & Graduation Requirements

REGENTS DIPLOMA

English – 4 credits

Social Studies – 4 credits

Science – 3 credits

Math – 3 credits

Art or Music – 1 credit

Health – 0.5 credits

P.E. – 2 credits (all 4 years)

Foreign Language – 1 credit

Major Classes & Electives – 3.5 credits

REQUIRED EXAMS

English Language Arts

Algebra

Global History & Geography

1 Science (Biology, Chemistry or Physics)

US History

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22 credits

& 5 Exams

◆ All courses of study are college preparatory. Students are expected to complete a full NYS Regents (R) program.

◆ Advanced Placement (AP) courses are taught in several academic areas. Currently, AP exams are offered in English, Social Studies, Mathematics and Science.

◆ During the third quarter of the first academic year, students select a major. Prior to the actual time of selection, faculty members address the freshmen and provide details about the respective programs.

◆ The counselors interview and advise students yearly about scheduling options. It is suggested that you take advantage of the full range of subjects offered, schedule permitting, so that you may prepare yourself for the best career and college opportunities.

◆ Each student is also required to complete a minimum of 20 hours of **documented community service.**
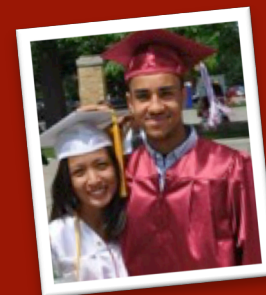
REGENTS DIPLOMA WITH ADVANCED DESIGNATION

English – 4 credits

Social Studies – 4 credits

Science – 3 credits

Math – 3 credits

Art or Music – 1 credit

Health – 0.5 credits

P.E. – 2 credits (all 4 years)

Foreign Language – 1 credit

Major Classes & Electives – 3.5 credits

REQUIRED EXAMS

All of the required exams for the Regents Diploma and additionally:

Checkpoint B Exam Following Year 3 of a Foreign Language

3 Regents Math Exams (Algebra, Geometry, & Algebra II)

2 Regents Science Exams (1 of these exams must be Regents Biology)

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22 credits & 9 Exams

HUTCH – TECH MAJORS

We are proud to offer majors focused in **Biochemical Science, Advanced Manufacturing Engineering & Architectural Engineering, Computer Technology, and Electrical Technology**. A student chooses their major after beginning their freshman year at Hutch Tech. This decision should be taken seriously as students are not permitted to switch majors or drop their major classes at any time. All programs offer transferrable skills that will benefit the student in the future regardless of what they choose to pursue after graduation.

How Our Majors Prepare Students for College

The best way to academically prepare for college is to take a college preparatory curriculum. This includes **4 years of English, 4 years of Science, 4 years of Social Studies, 4 years of Mathematics, and at least 3 years of a Foreign Language.** Due to the rigorous requirements for the same college majors that Hutch tech offers (ex: Biochemical, Engineering, Computer, and Electrical Technology), we also require the following to improve your chances of being accepted into the college major of your choice.

As Hutch Tech is a technical high school, we do require that students take 4 math classes (Algebra, Geometry, Algebra II/Trigonometry, <u>and</u> Pre-calculus, Calculus, <u>or</u> AP Calculus.

- Our science sequence is Living Environment, Chemistry, and Physics.
    - o Students in all majors may take AP Physics their senior year depending on their performance in Regents Physics and if there is available space in their schedule.
    - o Students who major in Biochemical Technology also take Organic Chemistry, Advanced Chemistry **<u>and</u>** Advanced Biology **<u>or</u>** AP Biology for their major requirements.

For students interested in pursuing a degree in engineering (mechanical, architectural, electrical, chemical, biological, civil, etc.) and computer science fields:
- Colleges generally look for 4 years of math (including pre-calculus, calculus, or AP Calculus) and at least 3 years of science including labs (including biology, chemistry, and physics). Be advised that some schools require 4 years of science.
- Additionally for students who are interested in architecture, some colleges/universities require the submission of a design portfolio in order to be considered for acceptance.
- Be advised that schools also look for certain GPA and standardized testing (ACT and/or SAT) scores for these majors.

For students interested in pursuing degrees in the applied sciences (biochemistry, biology, chemistry, clinical laboratory science, etc.) or other majors that lead to professions in the medical field:
- Colleges look for 4 years of math and a minimum of 3 years of science including labs.
- Some programs at some schools do have additional requirements. For example, the nursing program at D'Youville College requires applicants to have at least an 80 or better in classes and/or Regents exams for English 3, Living Environment, and Chemistry.
- Be advised that schools also look for certain GPA and standardized testing (ACT and/or SAT) scores for these majors.

TECHNICAL PROGRAM REQUIREMENTS

In addition to the NYS graduation requirements, each student is expected to fulfill a technical program consisting of courses for their chosen major. All courses teach skills that are transferable to any career.

Biochemical Science

Organic Chemistry Advanced Chemistry Advanced Biology	This major provides a strong foundation for further study in scientific, medical, and pharmaceutical fields.

Computer Technology

Electricity Lab Computers 10 Computer Science 1 Computer Science 2 Advanced Programming	This major provides a strong foundation for further study in computer science and/or computer electronics.

Electrical Technology

Electricity Lab Electronics Lab Electrical Engineering 1 & 2	This major provides students with a strong foundation for further study in Electrical Engineering.

Advanced Manufacturing Engineering

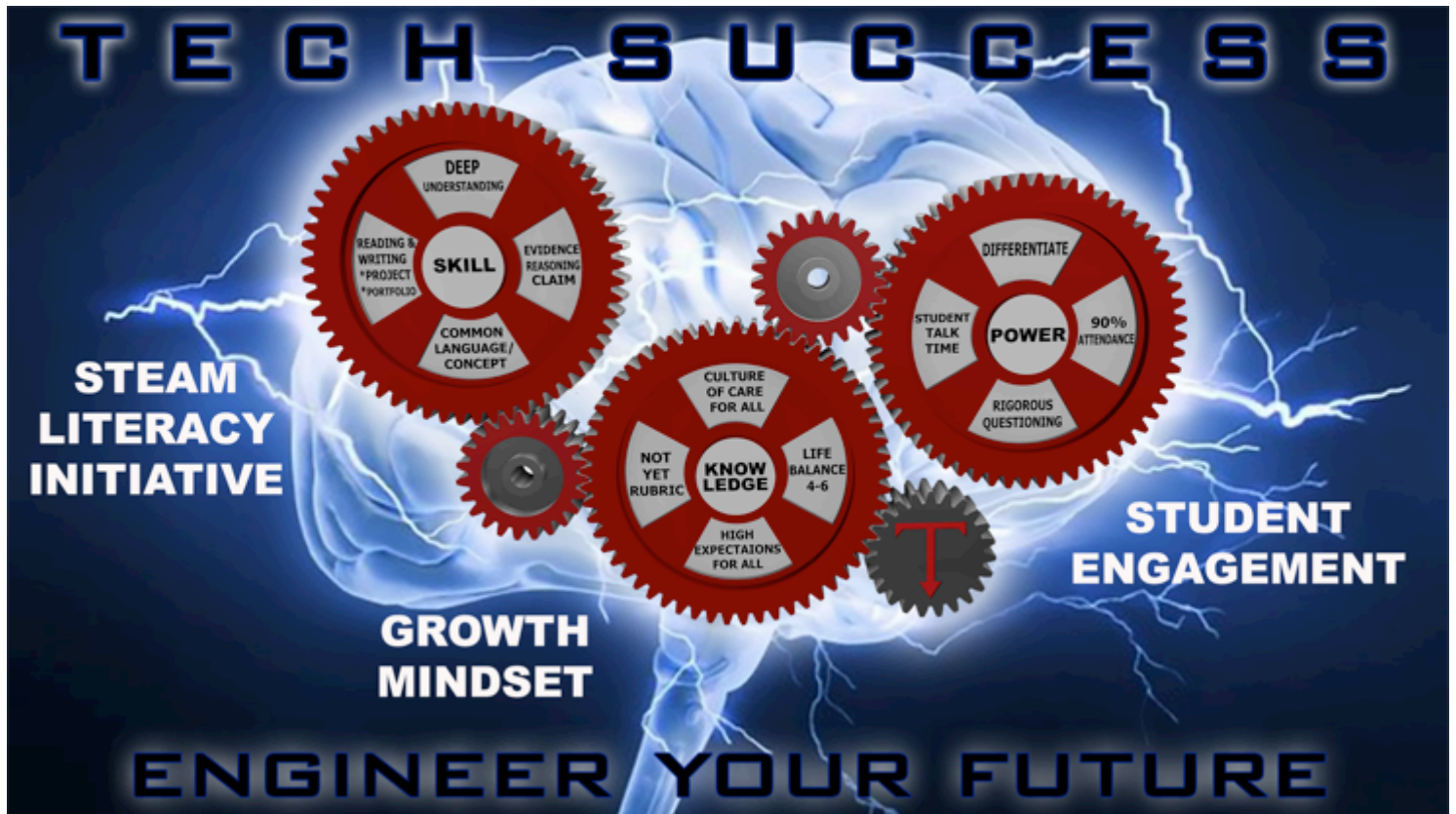|	
Design & Drawing for Production Engineering Manufacturing Engineering Design / CAD 1 Engineering Design / CAD 2 Engineering Manufacturing Processes	This major provides a strong foundation for further study in engineering, design, and manufacturing career fields.

Architectural Engineering

Design & Drawing for Production Architectural Building Systems Architectural Design / CAD 1 Architectural Design / CAD 2 Architectural Modeling Lab	Architectural CAD focuses on careers in designing, planning, & maintaining the built environment. We explore the many facets of construction & design 3D residential structures.

TECH SUCCESS PROGRAM

In efforts to support students academically, Hutch Tech has implemented a before school and after school program to link students who may require additional supports with teachers of core content areas. This is called

THE TECH SUCCESS PROGRAM

If a teacher, counselor, or administrator identifies a student as struggling academically, **that student may be signed up automatically for the Tech Success Program and be expected to attend**. The mandatory tutoring will help eliminate failures and help students get back on track and maintain academic success.

Students will have opportunities to improve their grade and learn missed material by completing appropriate missing assignments, obtaining help on current class assignments, or by completing additional assignments that review classroom material (this is not extra credit but a chance to repair and to extend learning).

The Tech Success program is also available to students who wish to attend on a voluntary basis.

Communication is Key to Success!

Communication is paramount in education. Whether it is teacher to student, student to student, teacher to teacher, teacher to parent, teacher to admin or admin to parent, or vice versa, communication is needed to make sure our students are successful.

At Tech we use multiple resources to communicate in addition to in-person conversation:

Email - connect with staff, teachers, students and parents through email.

The Tech Website (www.hcths.com) and student/parent portal- relevant information and resources about our district, school, and classrooms.

Google Classroom, & Schoology- these systems share assignments and announcements with students and parents.

SPEAKING TO BE UNDERSTOOD

LANGUAGE

To communicate or to convey your thoughts, word choice is important. Using the appropriate vocabulary and grammar is a key component of great speaking. This includes vocabulary specific to the content or subject.

VOLUME

Volume that is appropriate for the space and the number of people is important. Without proper volume it is difficult to convey your message or to hold the attention of your audience.

EYE CONTACT

Scanning the room while speaking and making eye contact with various members of the audience, helps to hold the attention. Eye contact helps the audience engage in what you are speaking about.

BODY LANGUAGE

Proper posture, gestures or movement helps show confidence and hold attention. Poor posture, too many gestures or nervous movements create a distraction for the listener.

PACING

The rate of speech, or pacing, is important for many reasons. Too slow or too fast makes it difficult for the audience to maintain their attention. Proper pace shows speaker confidence and holds attention.

Tech Traditions

Tech's traditions engage the community, bring an element of fun, and uniquely connect students with each other as well as staff. Ultimately Tech's traditions are just one aspect that make it such a special place.

PI DAY

Pi Day is celebrated on March 14th (3.14) and starts at 2 π (6:28am) at Tech. Pi (Greek letter "π") is the symbol used in math to represent a constant, the ratio of the circumference of a circle to its diameter, approximately 3.14159. Techtonians partake in various contests, have fun with their friends, and eat Pie.

TECHMAS

"Techmas" is our annual multicultural holiday celebration held the last Friday before winter recess. All of Tech comes together as staff, teachers, and students celebrate being one family we like to call Tech Nation. Techmas includes performances by students and events throughout the day with a few surprises along the way.

SPIRIT DAYS

On Fridays throughout the year at Hutch Tech students are encouraged to show their school spirit by wearing our school colors, maroon and white. We also have 2 spirit weeks over the course of the year that encourage students to partake in themed days throughout the week. Past themes have included pajama day, class color day, and wacky hair day.

Our Alma Mater

Every morning we start out our day with the singing of our National Anthem and Hutch Tech's Alma Mater.

Come all ye loyal friends of Tech,
and swell our joyous song.
Come singing Technics' glorious praise
with voices brave and strong.
To Tech, our school in memory dear,
to Tech our song we raise.
To Tech, our hearts are ever near.
Our lives shall be her praise.

EXTRACURRICULAR ACTIVITIES

High school is FUN when you participate! You learn more, make more friends, make more memories, and become an Engineer forever when you participate!

Students that participate in extra-curricular activities are shown to be more successful in the classroom and beyond. Participation is the back bone of school spirit and pride. It is an integral part of the Student Experience. We have countless participants in athletics, performing arts, and club participants improving our community! Don't miss out on the fun, memories and the character building activities at Hutch Tech!

ATHLETICS

Official School Team Mascot: Hutch Tech Engineers

Official School Team Colors: Maroon & White
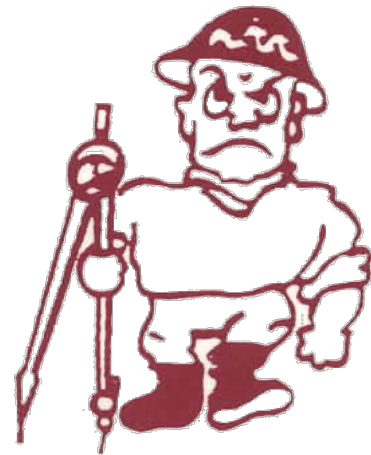
Fall Sports:	Winter Sports:	Spring Sports:
(tryouts & practices begin in August)	(tryouts & practices begin in November)	(try outs begin in February)
Soccer	Bowling	Baseball
Cheerleading	Boys Basketball	Softball
Track & Cross Country	Girls Basketball	Tennis
Football JV & Varsity	Swim	Track
Volleyball	Winter Track	
Golf	Cheerleading	

CLUBS

* Anime Club *

* Hutch Tech Band *

* Cycling Club *   * Gay-Straight Alliance *

* Chess Club *   * Guitar Club *

* Hutch Tech Chorus *   * Honor Society *

* Debate Team *   * Italian Club *

* Drama Club *   * Jazz Ensemble *

* Drill Team *   * JROTC *

Spoken Word Club   * Tech Tribune *

K-Pop Club

PERFORMING ARTS

Band	Drama Club
Chorus	Drill Team

Hutch Tech has a respected history of fine performing arts programs. Some of these programs have courses during the school day as well as a full practice schedule outside of the school day. You may see your counselor or contact the program contacts directly regarding the programs.

Community Involvement

High Schools have a close relationship with their community. Hutch Tech is not an exception. We rely on our community to support our programs, provide opportunities for kids, and to create a positive climate to live and learn in.

Preparation for career and college includes community service. Community service makes you more competitive in getting into your dream college, and it is a requirement for 12th grade civics courses. **All seniors at Hutch Tech are required to complete 20 hours of documented community service**; But don't wait until you are a senior—find your passion for volunteering today!

In this section you will find a list of reasons why volunteerism is good and a description of the JROTC which has a mission around community service. Your counselor can also help you identify additional opportunities to volunteer within the community.

JROTC

What is JROTC?

The Army Junior Reserve Officer Training Corps (JROTC) is a program offered to high schools that teaches students (Cadets) character education, student achievement, wellness, leadership, and diversity. Collectively, these lessons motivate students (Cadets) to be better citizens.

The Army JROTC Curriculum

The JROTC curriculum, which fully or partially addresses a number of national academic standards – to include Common Core State Standards (CCSS) – includes course work on leadership, civics, geography and global awareness, health, and wellness, language arts, life skills, and U.S. history. The curriculum is based on the principles of performance-based, learner-centered education and promotes development of core abilities: capacity for life-long learning, communication, responsibility for actions and choices, good citizenship, respectful treatment of others, and critical thinking techniques.

11

Top 10 Reasons to Volunteer

#10: It's good for you. It reduces stress and takes your focus off yourself.

#9: It saves resources. The estimated value of a volunteer's time is $15.39 per hour.

#8: Volunteers gain professional experience.

#7: It brings people together.

#6: It promotes personal growth and self-esteem.

#5: Volunteering strengthens your community.

#4: You learn a lot.

#3: You get a chance to give back.

#2: Volunteering encourages civic responsibility.

#1: You make a difference.

The best way to find yourself is to lose yourself in the service of others.

Mahatma Gandhi

WE ARE TECH

5 FLOORS

4 MAJORS

3 SECURITY OFFICERS

2 PEP RALLIES

1 FAMILY

ENGINEERS
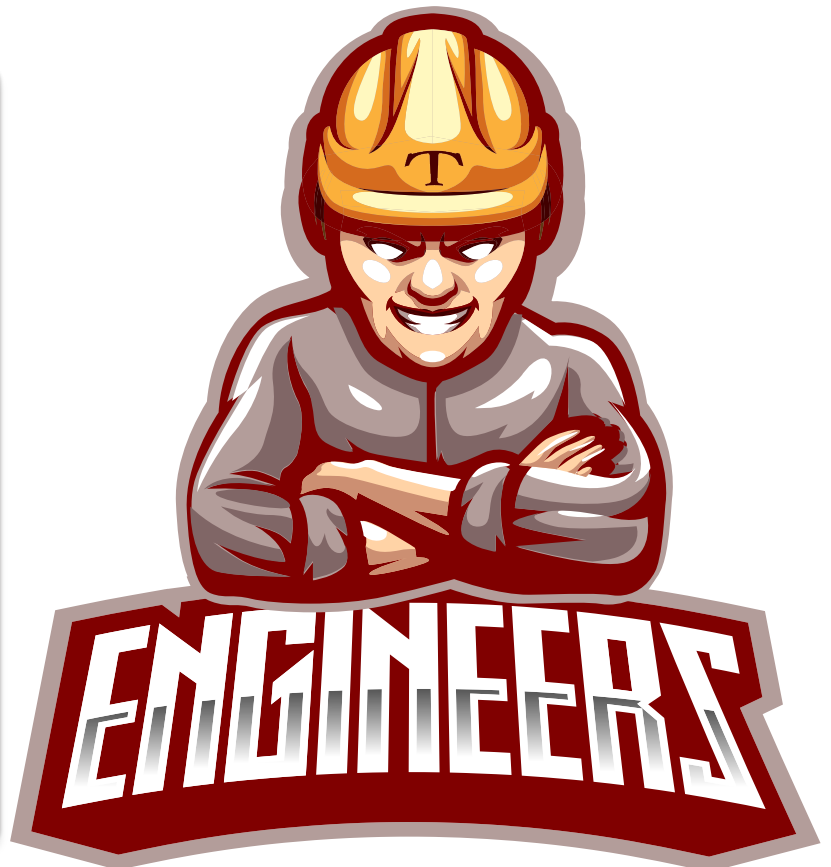
Our Mission

To provide a 21st Century education for young men and women within a safe community environment for lives of accomplishment and good citizenship.

Our Vision

We at Hutchinson Central Technical High School envision our learning community as the premier technical preparatory high school in the Greater Buffalo/ Niagara Region. Our graduates possess the skill, knowledge, and power to compete and excel in the pursuit of continued academic and career readiness fully aware of the challenges and opportunities of a global economy.

The seeds of intellectual and academic excellence are cultivated in the fertile soil of personal responsibility, discipline, and character to reach their full potential.