SPARTAN SCHOOL OF TECHNOLOGY
FOUR YEAR COURSE PLANNER

Required courses for graduation are filled in for each year.

Grade 9 (Class of 2026)
1. P.E. & Health
2. English
3. World History or AP European History
4. Algebra I
5. Biology
6. World Language
7. Instructional Technology (2.5 credits
   Financial Literacy (2.5 credits)
8. Makerspace I

Grade 10 (Class of 2025)
1. P.E. & Health
2. English
3. U.S. History I
4. Geometry
5. Chemistry
6. World Language
7. Makerspace II
8. Elective

Grade 11 (Class of 2024)
1. P.E. & Health
2. English
3. U.S. History II
4. Algebra II
5. Physics
6. World Language Elective
7. Engineering Graphics and Intro to CAD (2 Credits) (pge 60)
8. Elective

Grade 12 (Class of 2023)
1. P.E. & Health
2. English
3. U.S. History III
4. Mathematics Elective
5. Science Elective
6. World Language Elective
7. Applied Computer Aided Design (2 Credits) (pge 60)
8. Elective

**** Recommended Elective - AP Computer Science***
Industry Valued Credential: AutoDesk Certified User Certification

Strong design software skills are a great asset in both the academic and professional arenas. Teaching students to use state-of-the-art Autodesk® design software such as AutoCAD, Inventor, Revit, Maya, 3DS Max, and Fusion 360, along with providing Autodesk Certified User certification gives them a significant advantage in achieving college or career success.

SPARTAN SCHOOL OF TECHNOLOGY

Students interested in technology may apply to the academy as 8th grade students. Participating students get a rigorous project-based and hands-on introduction to the skills and knowledge needed for the technology career pathway, while building 21st century competencies valuable to any career. In addition to the core high school curriculum, School of Technology students study a series of technology-focused topics through a project-based learning framework. Courses include Makerspace I, Makerspace II, Engineering Graphics and Intro to CAD, Applied Computer Aided Design, and AP Computer Science Principles. School of Technology students also build communication, collaboration and critical thinking skills through an extensive series of real-world learning experiences. Course credit is earned through the memorandum of understanding with New Jersey Institute of Technology (NJIT) and will allow students to earn course credit through NJIT's Pre-College program. Students must apply and be accepted to the program and receive a "C" or higher for NJIT credit.

Students are required to participate in Structured Learning Experiences such as job shadowing, volunteer opportunities, school-based enterprises, and paid and unpaid internships with local businesses. Additionally students are required to be active members of Technology Student Association (TSA). The Technology Student Association enhances personal development, leadership, and career opportunities in STEM, whereby members apply and integrate these concepts through intracurricular activities, competitions, and related programs.

MAKERSPACE I
Credits: 5 Grades 9- 12

Create, invent, and learn! MAKERSPACE I is a platform for students to explore a variety of hands-on projects. A combination of lab, shop, and idea incubator, this course serves as a multidisciplinary collaborative studio space for creative endeavors. Rooted in the Design Process, its aim is to provide students with an exciting overview of the latest trends in technology, including Robotics, 3-D Design and Printing, Basic Electronics, Prototyping and more. Science, Technology, Engineering, Art and Math (STEAM) – there's something here for everyone! Students will become familiar with techniques and skills, gaining invaluable real-world experience as they explore state-of-the-art software, gear and processes used across a number of industries.

MAKERSPACE II
Prerequisite: Students must attain a grade of 90 or above in MakerSpace I and/or Teacher recommendation
Credits: 5 Grades: 10-12

Utilizing the concepts addressed in MAKERSPACE I, this course serves as a platform for students to explore a variety of hands-on projects. A combination of lab, shop, and idea incubator, this course serves as a multidisciplinary collaborative studio space for creative endeavors. Its aim is to provide students with an exciting overview of the latest trends in technology. Intermediate skills and concepts in Robotics, 3-D Design and Printing, Basic Electronics, Prototyping, laser cutting and engraving, CNC routing and milling, vacuum forming and vinyl cutting will be explored. Science, Technology, Engineering, Art and Math (STEAM) – there's something here for everyone!

ENGINEERING GRAPHICS AND INTRODUCTION TO CAD
Credits: 5 Grades: 11-12

Basic principles of Engineering graphics, blueprint reading and geometric constructions are reviewed. Multi-view projections and 3D visualization are introduced. CAD software Autodesk Inventor Professional is studied extensively. Using Inventor students learn dimensioning, creating Sectional, Auxiliary and Detail/Break views. *Aligns with NJIT course MET 103* **(2 credits with NJIT Pre-College program application, and successful completion of course with "C" or above). Reduced NJIT tuition fees apply.**

APPLIED COMPUTER AIDED DESIGN
Credits: 5 Grades: 11-12

A second course in Computer Aided Design (CAD), additional AutoCAD topics include blocks, move and copy, array, mirror, text, text styles, 3D and isometric modes. Upon successful completion of this course, students should be able to use advanced AutoCAD commands to quickly and efficiently produce 2D and 3D drawings, and also be able to modify the AutoCAD environment (e.g., menus, macros, etc.) to boost productivity. *Aligns with NJIT course MET 105.* **(2 credits with NJIT Pre-College program application, and successful completion of course with "C" or above). Reduced NJIT tuition fees apply.**