



# The Design and Technology Academy

@ Theodore Roosevelt High School

DATA students are not required to select a strand until their sophomore year. Strands are designed to assist students in making the best possible choices for career fields of interest.

## Composite Strand

*The composite strand is a rigorous college preparatory program with DATA electives from the architecture, engineering and visualization strands while maximizing opportunities for PAP, AP and dual credit classes.*

### **9<sup>th</sup> Grade**

World Studies I (World Geography/English I)  
Math (Algebra I or Geometry)  
Physics  
Foreign Language  
Survey of Design Technology  
Electronic Media II or Band / Athletics / Spirit  
Survey in Fields of Design **or** Healthy Lifestyles  
\*Summer Camp – Healthy Lifestyles & Outdoor Adventure

### **11<sup>th</sup> Grade**

English III  
U.S. History  
Math (Algebra II or PreCalculus)  
Science Elective  
Foreign Language **or** DATA Composite Elective(s)  
Professional Communication & Leadership / Multimedia  
Composite Elective(s) **or** Band / Athletics / Spirit

### **10<sup>th</sup> Grade**

World Studies II (World History / English II)  
Math (Geometry or Algebra II)  
Biology  
Chemistry  
Foreign Language  
DMRA / Statics **or** Circuits  
Composite Elective(s) **or** Band / Athletics / Spirit

### **12<sup>th</sup> Grade**

English IV  
Government / Economics  
Math (PreCalculus, Calculus, or Statistics)  
Computer Science PAP/AP  
Portfolio / Senior Design Project  
Composite Elective(s)  
Composite Elective(s) **or** Band / Athletics / Spirit

**\*Composite electives: Computer Science PAP, Computer Science AP, Publication Graphics, Digital Photography, Video Game Design, Freehand Drawing, Dynamics, Circuits, Statics, Environmental Engineering, Creative Writing, Advanced Web Design & Advanced Computer Science: SmartPhone Applications.**

## Architecture Strand

*The architecture strand is a comprehensive program for students interested in pursuing an architecture degree in college. The electives offered will provide in-depth opportunities for students to investigate various aspects of architecture.*

### **9<sup>th</sup> Grade**

World Studies I (World Geography/English I)  
Math (Algebra I or Geometry)  
Physics  
Foreign Language  
Survey of Design Technology  
Electronic Media II **or** Band / Athletics / Spirit  
Survey in Fields of Design **or** Healthy Lifestyles  
\*Summer Camp – Healthy Lifestyles & Outdoor Adventure

### **11<sup>th</sup> Grade**

English III  
U.S. History  
Math (Algebra II or Precalculus)  
Science Elective  
Foreign Language **or** AutoCAD / Virtual Architecture  
Professional Communication & Leadership / Multimedia  
Architectural Design Studio I **or** Band / Athletics / Spirit

### **10<sup>th</sup> Grade**

World Studies II (World History / English II)  
Math (Geometry or Algebra II)  
Biology  
Chemistry  
Foreign Language  
Statics / DMRA  
Elective(s) **or** Band / Athletics / Spirit

### **12<sup>th</sup> Grade**

English IV  
Government / Economics  
Math (Precalculus, Calculus, or Statistics)  
Portfolio / Senior Design Project  
Communication Graphics / Freehand Drawing III  
Architectural Design Studio II  
Science Elective **or** Band / Athletics / Spirit

**\*Architecture electives: Communication Graphics, AutoCAD, Virtual Architecture: Interior, Landscape and Green Design, Architectural Design Studio I, Architectural Design Studio II, Environmental Science AP, Physics AP B, Physics AP C, Digital Photography, Computer Science PAP, Computer Science AP A & Advanced Computer Science: SmartPhone Applications.**



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## Engineering Strand

*The engineering strand is a comprehensive program for students interested in pursuing a college engineering degree. This strand offers college-level engineering courses at the typical rigor of a challenging engineering program.*

### **9<sup>th</sup> Grade**

World Studies I (World Geography/English I)  
Math (Algebra I or Geometry)  
Physics  
Foreign Language  
Survey of Design Technology  
Electronic Media II **or** Band / Athletics / Spirit  
Survey in Fields of Design **or** Healthy Lifestyles  
\*Summer Camp – Healthy Lifestyles & Outdoor Adventure

### **11<sup>th</sup> Grade**

English III  
U.S. History  
Math (Algebra II or PreCalculus)  
Science (Physics AP C)  
Foreign Language or Circuits / Dynamics  
Professional Communication & Leadership / Multimedia  
Computer Science AP **or** Band / Athletics / Spirit

### **10<sup>th</sup> Grade**

World Studies II (World History / English II)  
Math (Geometry or Algebra II)  
Biology  
Chemistry  
Foreign Language  
Statics / AutoCAD  
Computer Science PAP **or** Band / Athletics / Spirit \*\*

### **12<sup>th</sup> Grade**

English IV  
Government / Economics  
Math (Calculus preferred)  
Portfolio / Senior Design Project  
Communication Graphics / Intro. To Enviro. Engineering  
Engineering Science Elective  
Adv. Comp. Sci: SmartPhone Apps **or** Band / Athletics / Spirit

**\*Engineering electives: Chemistry AP, Environmental Science AP.**

## Visualization Strand

*The visualization strand provides a foundation of knowledge and skills in this rapidly developing field. This strand is designed to give students an understanding of the artistic, mathematic, scientific, and technical fundamentals of visualization.*

### **9<sup>th</sup> Grade**

World Studies I (World Geography/English I)  
Math (Algebra I or Geometry)  
Physics  
Foreign Language  
Survey of Design Technology  
Electronic Media II **or** Band / Athletics / Spirit  
Survey in Fields of Design **or** Healthy Lifestyles  
\*Summer Camp – Healthy Lifestyles & Outdoor Adventure

### **11<sup>th</sup> Grade**

English III  
U.S. History  
Math (Algebra II or PreCalculus)  
Science Elective (Physics AP B or C)  
Foreign Language **or** Computer Science PAP  
Professional Communication & Leadership / Multimedia  
Visualization Elective\* **or** Band / Athletics / Spirit

### **10<sup>th</sup> Grade**

World Studies II (World History / English II)  
Math (Geometry or Algebra II)  
Biology  
Chemistry  
Foreign Language  
DMRA / Freehand Drawing III **or** Creative Writing  
Visualization Elective(s)\* **or** Band / Athletics / Spirit

### **12<sup>th</sup> Grade**

English IV  
Government / Economics  
Math (PreCalculus, Calculus, or Statistics)  
Computer Science PAP/AP  
Portfolio / Senior Design Project  
Visualization Elective(s)  
Visualization Elective(s) **or** Band / Athletics / Spirit

**\*Visualization electives: Digital Photography, Publication Graphics, Digital Graphics – Animation & Claymation, Advanced Web Design, Video Broadcast Production, Video Game Design, Freehand Drawing, Creative Writing, Advanced Computer Science: SmartPhone Applications.**