Engineering
Curriculum Plan 2022-2023

DAYTON PUBLIC SCHOOLS
Career Technical Education

Area of Concentration: F6   **CTSO:** SkillsUSA

Program Courses

EMIS Course Code	Course Name	Grade	Is this course a CTAG?
175001	Engineering Design	10	Yes
175002	Engineering Principles	11	No
175105	DC Circuits	11	Yes
175006	Computer Integrated Mfg	12	Yes
175009	Engineering Capstone	12	N/A

Industry Credentials/Certifications

Industry Credentials Offered	ODE Points Available	Completed during Grade
SolidWorks Associate	4	
AutoDesk Inventor Certified User	4	
OSHA 10	1	

College Credit Opportunities

Course Name	College	Credit Hours	Completed during Grade
CTEGT002 Engineering Graphics	CTAG	3	10
CTEET001 DC Circuits	CTAG	3	11
CTMET005 CADD	CTAG	3	12

Work-Based Learning Opportunities

On the job placement opportunities	
CTSO competitions	

Tasks

- Maintain electronic equipment.
- Test performance of electrical, electronic, mechanical, or integrated systems or equipment.
- Review technical documents to plan work.
- Install instrumentation or electronic equipment or systems.
- Confer with other personnel to resolve design or operational problems.
- Resolve operational performance problems.
- Create electrical schematics.
- Assemble equipment or components.
- Evaluate designs or specifications to ensure quality.
- Interpret design or operational test results.
- Maintain operational records or records systems.
- Select tools, equipment, or technologies for use in operations or projects.
- Estimate technical or resource requirements for development or production projects.
- Direct industrial production activities.
- Direct installation activities.
- Document technical design details.
- Estimate operational costs.
- Prepare project budgets.
- Train personnel on proper operational procedures.
- Design electrical equipment or systems.
- Operate computer systems.
- Purchase materials, equipment, or other resources.
- Update technical knowledge.
- Advise customers on the use of products or services.
- Direct quality control activities.

- Create schematic drawings for electronics.
- Analyze costs and benefits of proposed designs or projects.
- Determine operational criteria or specifications.
- Evaluate characteristics of equipment or systems.
- Test green technologies or processes.

Engineering Technology
Program of Study
Aligned with Sinclair – Engineering and Engineering Technology University Transfer (UD) ESUP.S.AS

Secondary							
9	English 9	Algebra I or Geometry	Physical Science	World History	PE/PE	Health/ Career Exploration	Elective
10	English 10	Geometry or Algebra II	Biology	U.S. History	Elective	**Engineering Design 175001**	
11	English 11	Algebra II or Pre-Calculus	Chemistry or Environmental Science	American Government	Elective	**Engineering Principles 175002**	**DC Circuits 175105**
12	English 12	Adv Math	Elective	Elective	Elective	**Computer Integrated Manufacturing 175006**	Engineering Capstone 175009

Post-Secondary					
Fall Year 1	MAT 2270 Calc & Analytic Geo I	ENG 1101 English Comp I	CHE 1211 General Chemistry I	CHEM 1251 Lab for General Chemistry I	HIS 1112 Western Civ II
Spring Year 1	MAT 2280 Calc & Analytic Geo II	PHY 2201 General Physics I	PHY 2207 Lab for General Physics I	PLS 1120 American Fed Govt	PHI 2205 Intro to Philosophy
Fall Year 2	MAT 2290 Calc & Analytic Geo II	PHY 2202 General Physics II	PHY 2208 Lab for General Physics II	PHY 2210 MATLAB for Sci & Engineers	MEE 2101 Statics for Engineers
Spring Year 2	MAT 2310 Elem Diff Eqns	MET 1301 Solidworks Basics	MEE 2201 Thermodynamics for Engr	COM 2211 Effective Public Speaking	ECO 2180 Microeconomics
Summer Year 2	ENG 1201 English Comp II	REL 1112 Western Religions	MET 1161 Software Tools for ET	MEE 2301 Strength of Materials Egr	MEE 2401 Dynamics for Engineers

Key	Required Course	Recommended Elective Courses	High School Career-Technical Courses **Bold =College Credit Opportunity**