TOPS University Pre-apprenticeship: Mechanical Engineering Technician
Apprenticeship Partner: The 1881 Institute (1881)

Overview

The mechanical engineering technician pre-apprenticeship is designed to prepare students to enter and succeed in a registered apprenticeship while exploring the mechanical engineering technician trade. This mechanical engineering technician pre-apprenticeship program gives students an introduction to mechanical design, manufacturing of components, and the workplace soft skills that support a team of engineers and scientists. These skills are necessary for advanced placement into a post-secondary mechanical engineering technician apprenticeship program. Completers who are 18 or older can apply for a registered mechanical engineering technician apprenticeship with engineering companies willing to hire them.

Capstone Credentials

Regional (Emerging)	Basic	Advanced	Fast Forward Advanced Plus
Fusion 360	Autodesk Certified User AutoCAD, ADDA Certified Mechanical Apprentice Drafter, NIMS Machining Level 1	AutoDesk Inventor Certified User, NIMS Machining Level 2	Pre-Apprenticeship: Mechanical Engineering Technician

*Core Academic Course
**Jump Start CTE Course

Grade 9	
Semester 1	**Semester 2**
*English I 120331	*English II 120332
*Algebra I 160321	*Algebra II 160322
*Physical Education I 190105	*Art Elective
*Physical Science 150802	*Civics 220501

Grade 10	
Semester 1	**Semester 2**
*English III 120333	*Geometry 160323
*World History 220401	*Biology I 150301
*1/2 Physical Education II 190106, ½ Health Education 190500	*US History 220403
*Foreign Language I	*Foreign Language II

Additional and/or equivalent TOPS core aligned courses can be found in Bulletin 741.

Grade 11			
Semester 1		**Semester 2**	
Postsecondary Course	**LDOE Course/Code**	**Postsecondary Course**	**LDOE Course/Code**
	*Advanced Math - Functions and Statistics 160347		*English IV 120334
	**Basic Technical Drafting 110560		*Chemistry 150401
	** Fast Forward Pre-Apprenticeship: 1881		** Fast Forward Pre-Apprenticeship: 1881

Grade 12			
Semester 1		**Semester 2**	
Postsecondary Course	**LDOE Course/Code**	**Postsecondary Course**	**LDOE Course/Code**
	*Physics 150000		*World Geography 220300 (or dual enrollment equivalent)
	**Fast Forward Apprenticeship: Op Spark - Professional Software Development 080535 (3 Credits)		**Fast Forward Apprenticeship: Op Spark - Professional Software Development 080535 (3 credits)

This pathway framework is an outline of how the approved courses can be implemented. Schools may opt to rearrange the order of course sequencing in order to meet local scheduling requirements. Additionally, Fast Forward pathways are dynamic and the Jump Start Review Panel will consider course equivalents on an as needed basis.