Portland Community College
Century High School

Engineering Pathway

Key
High School Academic
High School Career & Technical
PCC Dual Credit Articulated Courses
1-year Certificate or 2-year Certificate
AAS Degree
University

This program of study should serve as a guide, along with other career planning materials , as you continue your career path. Courses listed within this plan are only recommended coursework and should be individualized coursework to meet each learner's educational and career goals.

Education Levels	Grade	English / Language Arts	Math	Science	Social Studies / Sciences	Other Required Courses Electives Recommended Electives Learner Activities	*Career and Technical Courses and/or Degree Major Courses	
SECONDARY	9	Lit and Comp 9	Algebra I	Physics	World History 9	Health & PE		DIPLOMA
	10	Lit and Comp 10	Geometry	Chemistry	World History 10	Health & PE	Drafting 1	
	11	Amer. Lit and Comp	Algebra II	Biology	IB History	Second Language	Drafting 2	
	12	Writing 120	IB Math SL			Second Language	Engineering Prep	

AND COMMUNITY COLLEGE	TERM	PROGRAM OF STUDY						Certificates/Degrees/Occupations
	FIRST TERM	MCH 100 Machine Tool Basics	MCH 105 Blueprint Reading I	MCH 135 Basic Measuring Tools	MCH 120 Machine Shop Math	MCH 121 Manufacturing Processing I	MCH 115 Geometric Dimensioning and Tolerancing	**1 year Certificate - CNC Milling One Year Certificate**
	SECOND TERM	MCH 125 Speeds and Feeds	MCH 130 Machine Shop Trigonometry	MCH 145 Layout Tools	MCH 150 Precision Measuring Tools	MCH 268 CNC Program - Mill	MCH 110 Blue Print Reading II	
	THIRD TERM	MCH 205 Vertical Milling Machines and Operations	MCH 272 Mastercam Level I	MSD 115 Improving Work Relations				TOTAL CREDITS 48.5 Machine operators use computer-aided manufacturing (CAM) software to control, manipulate and

PORTL	**FOURTH TERM**	MCH 278 CNC Operation - Mill	MCH 280 Coperative Education: Machine Technology	MCH 288A Technical Skill Assessment in CNC Milling				manage precision tool production. Machine manufacturing and tool dies have become increasingly valuable, especially in the production of high-precision tools for high-tech manufacturing and large industrial construction. With such dramatic advancements over

	TERM	PROGRAM OF STUDY						Certificates/Degrees/Occupations
PORTLAND COMMUNITY COLLEGE	**FIRST TERM**	MCH 100 Machine Tool Basics	MCH 105 Blueprint Reading I	MCH 135 Basic Measuring Tools	MCH 115 Geometric Dimensioning & Tolerance	GENERAL EDUCATION	MCH 120 Machine Shop Math	**Associate of Applied Science Degree Civil Engineering Techonology**
	SECOND TERM	GENERAL EDUCATION	MCH 110 Blue Print Reading II	MCH 150 Percision Measuring Tools	MCH 160 Drilling Machines and Operations	MCH 190 Boring and Lathe	GENERAL EDUCATION	Minimum 106 credits. Students must also meet Associate Degree Comprehensive Requirements and Associate of Applied Science Requirements. Students must complete a total of sixteen credits of General Education. Math/computation competency is met through the courses in the program of study indicated with a § symbol. A maximum of 24 credits of Pass/No Pass and a maximum of 24 credits of cooperative education (MCH 280) are allowed in
	THIRD TERM	MCH 125 Speeds and Feeds	MCH 130 Machine Shop Trigonometry	MCH 175 Band Saws	MCH 180 Turning Machines and Operations	MCH 195 Threading on the Lathe	GENERAL EDUCATION	
	FOURTH TERM	GENERAL EDUCATION	MCH 296A Rino CAD Level 1	MCH 121 Manufacturing Process I	MCH 205 Vertical Milling Machines and Operations	MCH 225 Surface Grinding Machines and Operations		
	FIFTH TERM	MCH 259 CNC Programming - Lathe	MCH 268 CNC Programming - Mill	MCH 272 Matercam Level I	MCH 292 FDM Additive Manufacturing Fundamentals Orientaion			
	SIXTH TERM	MCH 278 CNC Operation Mill	MCH 297A Rhino CAD Level 2	MCH 273 Mastercam Level II	MCH 279 CNC Operation - Lathe			
	SEVENTH TERM	MCH 280 Cooperative Education: Machine Technology	MCH 287A Technical Skill Assessment in CNC Turning	MCH 288A Technical Skill Assessment in CNC Milling	MCH DEGREE ELECTIVES	MSD 115 Improving Work Relations		
UNIVERSITY								