

Highlands P-TECH Curriculum Alignment

Aircraft Maintenance					
HS Course #	HS Course Name	HS Credits	College Course #	College Course Name	College Credit Hours
	Principles of Distribution and Logistics DC	1.0	AERM 1310	Ground Operations	3
	Principles of Transportation Systems DC	1.0	AERM 1208	Federal Aviation Regulations	2
	Introduction to Aircraft Technology DC	1.0	AERM 1241	Wood, Fabric, and Finishes	2
	Introduction to Aerospace and Aviation DC	1.0	AERM 1303	Shop Practices	3
	Aviation Ground School	1.0	AERM 1315	Aviation Science	3
	Scientific Research & Design	1.0	AERM 1205	Weight and Balance	2
	Aircraft Airframe Technology + Lab	3.0	AERM 1347	Aircraft Auxiliary Systems	3
			AERM 1243	Instruments and Navigation/Communication	2
	Introduction to Transportation Technology	0.5	AERM 2233	Assembly and Rigging	2
	AC/DC Electronics	1.0	AERM 1414	Basic Electricity	4
	Scientific Research & Design	1.0	AERM 1254	Aircraft Composites	2
	Management of Transportation Systems	1.0	AERM 1352	Aircraft Sheet Metal	3
	Extended Practicum in Transportation Systems (I)	3.0	AERM 1253	Aircraft Welding	2
	Extended Practicum in Transportation Systems (II)	3.0	AERM 1449	Hydraulic, Pneumatic and Fuel Systems	4
			AERM 1350	Landing Gear Systems	3
	Aircraft Powerplant Technology/Advanced Transportation Systems Laboratory	3.0	AERM 1345	Airframe Electrical Systems	3
			AERM 2331	Aircraft Inspection	3
	Extended Practicum in Distribution and Logistics	3.0	AERM 2486	Internship - Airframe Mechanics and Aircraft Maintenance Technology/Technician	4

Engineering					
HS Course #	HS Course Name	HS Credits	College Course #	College Course Name	College Credit Hours
	Engineering Design II	2.0	ENGR 1201	Intro to Engineering	2
			ENGR 1304* OR	Engineering Graphics OR	3
			ENGR 2304*	Computer Programming for Engineering Applications	3

Manufacturing					
HS Course #	HS Course Name	HS Credits	College Course #	College Course Name	College Credit Hours
	Principles of Manufacturing	1.0	CETT 1409	DC-AC Circuits	4
	Manufacturing Engineering Technology I	1.0	INTC 1357	AC/DC Motor Control	3
	Diversified Manufacturing I	1.0	RBTC 1305	Robotic Fundamentals	3
	Manufacturing Engineering Technology II	1.0	RBTC 1347	Electromechanical Devices	3
			INMT 2303	Pumps, Compressors and Mechanical Drives	3
	Diversified Manufacturing II	1.0	CETT 1429	Solid State Devices	4
	Robotics I	1.0	ELMT 1305	Basic Fluid Power	3
	Practicum in Manufacturing	3.0	RBTC 1301	Programmable Logic Controllers	3
			MCHN 1438	Basic Machine Shop I	4
			INTC 2330	Instrumentation Systems Troubleshooting	3
			INTC 2433	Instrumentation Systems Installation	4
	Robotics II	1.0	CPMT 1349	Computer Networking Technology	3

			RBTC 2339	Robot Programming and Diagnostics	3
	Practicum in Manufacturing II	2.0	INTC 2288	Internship - Instrumentation Technology/Technician	2

Welding					
HS Course #	HS Course Name	HS Credits	College Course #	College Course Name	College Credit Hours
	Introduction to Welding DC	1.0	WLDG 1313	Intro to Blueprint Reading for Welders	3
	Welding I DC	2.0	WLDG 1425	Intro to Oxy-Fuel Welding and Cutting	4
			WLDG 1428	Intro to Shielded Metal Arc Welding (SMAW)	4
	Welding II DC	2.0	WLDG 1430	Intro to Gas Metal Arc Welding (GMAW)	4
	Welding II Lab DC	3.0	WLDG 1317	Intro to Layout and Fabrication	3
			WLDG 1434	Intro to Gas Tungsten Arc (GTAW) Welding	4
	Precision Metal Manufacturing I DC	2.0	WLDG 2451	Advanced Gas Tungsten Arc (GTAW) Welding	4
			WLDG 2452	Advanced Flux Cored Arc Welding	4
	Practicum in Manufacturing I DC	2.0	WLDG 2453	Advanced Pipe Welding	4
	Precision Metal Manufacturing II DC	2.0	WLDG 2443	Advanced Shielded Metal Arc Welding	4
			WLDG 2435	Advanced Layout and Fabrication	4
	Practicum in Manufacturing II DC	3.0	WLDG 2388	Internship – Welding Technology/Welder	3

Core Subject Courses					
HS Course #	HS Course Name	HS Credits	College Course #	College Course Name	College Credit Hours
	Algebra 2 DC	1.0	MATH 1314	College Algebra	3
	English III DC	1.0	ENGL 1301	Composition I	3
	Physics DC	1.0	PHYS 1305	Introductory Physics I Lecture	3
	Government / Economics DC	1.0	ECON 1301	Intro to Economics	3
	Art/Music Appreciation	0.5	ARTS 1301/ MUSI 1306	Art/Music Appreciation	3
	Chemistry DC	1.0	CHEM 1411	General Chemistry I	4
	US History DC	1.0	HIST 1301	United States History 1	3
			HIST 1302	United States History 2	3
	English III DC	1.0	ENGL 1301	Composition I	3
			ENGL 1302	Composition 2	3
	Pre-Calculus DC	1.0	MATH 1414	College Algebra (Pre-calculus track)	3
			MATH 2412	Pre-Calculus	4
	Speech DC	1.0	SPCH 1315*	Public Speaking	3
	Economics DC	0.5	ECON 2302*	Principles of Microeconomics	3
	Technical Writing DC	1.0	ENGL 2311*	Technical Writing	3
	English IV DC or Elective	1.0	ENGL 2322*	British Literature I	3
			ENGL 2323*	British Literature II	3
	Calculus I DC	1.0	MATH 2413	Calculus I	4
	Physics DC	1.0	PHYS 2425	University Physics I	4
	Government DC/Special Topics DC	1.0	GOV 2306	Texas Government	3
			GOV 2305	Federal Government	3

	Calculus II DC	1.0	MATH 2414	Calculus II	4
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