First Year – Fall Semester

Course Number	Course Title	Clock Hours	Credits
HPEM 100	Engine Repair Theory	30	2
HPEM 105	Engine Repair Diagnostics	56	2
HPEM 107	Basic Engine Tune-up	84	3
HPEM 109	Basic Engine Performance	84	3
CSC 100	Computer Concepts	28	1
WLD 105	Oxyacetylene Safety	28	1
WLD 110	Proper Use of the Cutting Torch	14	.5
WLD 111	Shop Orientation Maintenance and Safety	28	1
WLD 161	Gas Tungsten Arc Welding	70	2.5

● Selected Mathematics Course (Choose one)
  MATH 100 – Applied General Math
  MATH 101 – Intermediate Algebra
  MATH 102 – College Algebra *
		45	3

	Total	467	19

First Year – Spring Semester

Course Number	Course Title	Clock Hours	Credits
HPEM 110	Lathe and Mill Operations I	84	3
HPEM 112	Shop Management	28	1
WLD 122	Gas Metal Arc Welding I	168	6
WLD 123	Blue Print Reading	28	1
WLD 151	Shop Math	56	2
AED 100	Automated External Defibrillator	14	.5
HAZ 100	Hazardous Materials Safety	14	.5

● Selected Social Science Course (Choose one)
  ECON 105 – Leadership in the Global Workplace
  ECON 201 – Principles of Microeconomics I *
  SOC 100 – Introduction to Sociology *
		45	3

	Total	437	17

Second Year – Fall Semester

Course Number	Course Title	Clock Hours	Credits
HPEM 200	Introduction to High Performance Engine Machining	84	3
HPEM 205	High Performance Engine Machining Theory	45	3
HPEM 210	High Performance Engine Machining Diagnostics	140	5
HPEM 215	High Performance Basic Engine Porting	56	2
● Selected Behavioral Science Course (Choose one) 　PSYC 100 – Psychology of Human Relations 　PSYC 101 – General Psychology *		45	3
	Total	370	16

Second Year – Spring Semester

Course Number	Course Title	Clock Hours	Credits
HPEM 220	Lathe and Mill Operations II	84	3
HPEM 225	Dyno Tuning and Engine Analysis	56	2
HPEM 230	Advanced High Performance Engine Machining Theory	45	3
HPEM 235	Advanced High Performance Engine Machining Diagnostics	140	5
HPEM 240	Advanced High Performance Engine Porting	112	4
● Selected Communications Course (Choose one) 　COMM 101 – Communications and Career Strategies 　ENGL 101 – Composition * (CSS 100 – Career Search Strategies .5 credit) 　SPCM 101 – Fundamentals of Speech * (CSS 100 – Career Search Strategies .5 credit)		45	3
	Total	482	20

Elective Course: With the instructor's approval, SCT 100 – Solar Car Team may be substituted for up to 6 credits of course work or taken as an additional elective.

● Students will select a course in each of the areas listed to meet general education requirements. Courses marked with an asterisk (*) can be transferred directly to the university system and may be substituted for recommended courses on the outline. Students should speak with an advisor before doing so.

Students who select to take transferable communications course ENGL 101 or SPCM 101, must also register for CSS 100 – Career Search Strategies for .5 credit. This curriculum is required for all Lake Area Tech graduates and is included in the COMM 101 course but is separate from the university system.

High Performance Engine Machinist

Third Year Option For: Automotive ● Diesel ● Precision Machining

Semester Course Outline ● 2016 – 2017 ● Revised: 5/24/16

9 Months ● Credits Required for Graduation: 30

Second Year – Fall Semester

Course Number	Course Title	Clock Hours	Credits
HPEM 200	Introduction to High Performance Engine Machining	84	3
HPEM 205	High Performance Engine Machining Theory	45	3
HPEM 210	High Performance Engine Machining Diagnostics	140	5
HPEM 215	High Performance Basic Engine Porting	56	2
	Total	325	13

Second Year – Spring Semester

Course Number	Course Title	Clock Hours	Credits
HPEM 220	Lathe and Mill Operations II	84	3
HPEM 225	Dyno Tuning and Engine Analysis	56	2
HPEM 230	Advanced High Performance Engine Machining Theory	45	3
HPEM 235	Advanced High Performance Engine Machining Diagnostics	140	5
HPEM 240	Advanced High Performance Engine Porting	112	4
	Total	437	17