

Program Planning Guide

Motorcycle Mechanics, Diploma (D60260)

Program Length: 3 semesters

Career Pathway Options: Diploma in Motorcycle Mechanics

Program Sites: Lee Campus - Day Program

Suggested Course Schedule:	HOURS			Grade	Semester	Notes
	Class	Lab	Credit			
1st Semester (Fall)						
TRN 110	Intro to Transport Tech	1	2	2		
CIS 111	Basic PC Literacy	1	2	2		
MCM 111	Motorcycle Mechanics	3	8	7		
MCM 115	Motorcycle Chassis	1	6	3		
MAT 110	Math Measurement & Literacy	2	2	3		
		8	20	17		
2 nd Semester (Spring)						
TRN 120	Basic Transp Electricity	4	3	5		
MCM 122	Motorcycle Engines	2	9	5		
MCM 117	Motorcycle Dyno Tuning I	1	4	3		
MEC 111	Machine Processes I	1	4	3		
ENG 102	Applied Communication II	3	0	3		
		11	20	19		
3 rd Semester (Summer)						
MCM 217	Motorcycle Dyno Tuning II	1	4	3		
MCM 114	Motorcycle Fuel Systems	2	6	5		
TRN 180	Basic Welding for Transp	1	4	3		
		4	14	11		

Total semester Hours Credit: 47

Course Descriptions:

CIS 111 Basic PC Literacy 1-2-2

This course provides an overview of computer concepts. Emphasis is placed on the use of personal computers and software applications for personal and fundamental workplace use. Upon completion, students should be able to demonstrate basic personal computer skills.

ENG 102 Applied Communications II 3-0-3

Prerequisites: RED 080 and ENG 090 or appropriate placement test scores

This course is designed to enhance writing and speaking skills for the workplace. Emphasis is placed on generating short writings such as job application documents, memoranda, and reports and developing interpersonal communication skills with employees and the public. Upon completion, students should be able to prepare effective, short, and job-related written and oral communications. The computer is used as a writing and design tool for this course. This is a diploma-level course.

MAT 110 Math Measurement & Literacy 2-2-3

Prerequisite: Take one set: Set 1: DMA 010, DMA 020, and DMA 030 Set 2: MAT 060 and MAT 070 Set 3: MAT 060 and MAT 080 Set 4: MAT 060 and MAT 090 Set 5: MAT 095 or appropriate placement scores.

This course provides an activity-based approach that develops measurement skills and mathematical literacy using technology to solve problems for non-math intensive programs. Topics include unit conversions and estimation within a variety of measurement systems; ratio and proportion; basic geometric concepts; financial literacy; and statistics including measures of central tendency, dispersion, and charting of data. Upon completion, students should be able to demonstrate the use of mathematics and technology to solve practical problems, and to analyze and communicate results.

Motorcycle Mechanics, Diploma (D60260)

~ 2 ~

MCM 111	Motorcycle Mechanics	3-8-7	tools, and the basic setup and operation of common machine tools. Upon completion, students should be able to manufacture simple parts to specified tolerance.				
<p>This course covers the proper nomenclature of parts and components of motorcycles, ATVs. Topics include theory of operation, differences of operation, preventive maintenance, and operating principles involved in servicing and repairing motorcycles, ATVs. Upon completion, students should be able to perform basic inspection, diagnosis, repair, and/or adjustment of motorcycles, ATVs.</p>			TRN 110	Intro to Transport Tech	1-2-2	This course covers workplace safety, hazardous materials, environmental regulations, hand tools, service information, basic concepts, vehicle systems, and common transportation industry terminology. Topics include familiarization with major vehicle systems, proper use of various hand and power tools, material safety data sheets, and personal protective equipment. Upon completion, students should be able to demonstrate appropriate safety procedures, identify and use basic shop tools, and describe government regulations regarding transportation repair facilities.	
MCM 114	Motorcycle Fuel Systems	2-6-5	This course introduces various types of fuels and fuel systems used in motorcycle internal combustion engines. Emphasis is placed on the theory and principles of carburetion and fuel injection. Upon completion, students should be able to service, disassemble, inspect, reassemble, and adjust to manufacturers' specifications the components of various fuel systems.	TRN 120	Basic Transp Electricity	4-3-5	This course covers basic electrical theory, wiring diagrams, test equipment, and diagnosis, repair and replacement of batteries, starters, and alternators. Topics include Ohm's Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns.
MCM 115	Motorcycle Chassis	1-6-3	This course covers chassis adjustments, components, and types and uses of frames and suspensions. Emphasis is placed on proper and safe use of tools and equipment in servicing and maintaining motorcycle chassis. Upon completion, students should be able to service and repair motorcycle chassis systems and suspension components.	TRN 180	Basic Welding for Transp	1-4-3	This course covers the terms and procedures for welding various metals used in the transportation industry with an emphasis on personal safety and environmental health. Topics include safety and precautionary measures, setup/operation of MIG equipment, metal identification methods, types of welds/joints, techniques, inspection methods, cutting processes and other related issues. Upon completion, students should be able to demonstrate a basic knowledge of welding operations and safety procedures according to industry standard.
MCM 117	Motorcycle Dyno Tuning I	1-4-3	This course introduces the theory and safe operation of motorcycle chassis dynamometers. Topics include types of dynamometers, theory of operation, differences of operations, preventative maintenance and safe operating principles involved in motorcycle dynamometer tuning and diagnostics. Upon completions, students should be able to safely use motorcycle dynamometers to measure horsepower and torque, to optimize air-fuel metering and exhaust-flow, and to diagnose performance problems.				
MCM 122	Motorcycle Engines	2-9-5	This course covers the construction and operation of components in internal combustion engines used in modern motorcycles. Topics include two- and four-cycle engines, power trains, and final drive systems. Upon completion, students should be able to disassemble, inspect, measure, reassemble, and operationally test two- and four-cycle motorcycle engines.				
MCM 217	Motorcycle Dyno Tuning II	1-4-3	<i>Prerequisites: MCM 117</i> This course provides advanced instruction in motorcycle dynamometers that are utilized in high performance engine tuning. Topics include safe modification and customization of components and their effect on horsepower, torque, air-fuel metering, exhaust flow, fuel economy, acceleration and speed. Upon completions, students will safely use motorcycle dynamometers to optimize performance when customizing motorcycles and/or ATV's for racing and high performance street or off-road use.				
MEC 111	Machine Processes I	1-4-3	This course introduces shop safety, hand tools, machine processes, measuring instruments, and the operation of machine shop equipment. Topics include use and care of tools, safety, measuring				