

2017 Course Outline Automotive Engineering Year 1

Curriculum Goals:

To provide the student with the opportunity to experience the work of an automotive mechanic to assist him/her in making an informed decision for further study and/or employment. This course is practical and experiential. The student will be given the opportunity to learn through engaging in realistic and authentic tasks.

Vocational Pathway: Manufacturing and Technology

Learner Goals and Outcomes: On completion of this course, the student will be able to:

- 1. Demonstrate knowledge of workplace health and safety requirements in an automotive workshop.
- 2. Identify the general locations and functions of motor vehicle systems and main components.
- 3. Explain the operation of two and four stroke petrol and diesel engines.
- **4.** Disassemble and reassemble a single cylinder or multi-cylinder four stroke engine under supervision.
- **5.** Demonstrate knowledge of interchanging and balancing road wheels in the motor industry.
- **6.** Balance wheels off a vehicle in the motor industry.
- 7. Remove and replace road wheels in the motor industry.
- 8. Remove and replace motor vehicle lamps in the motor industry.
- 9. Decide if they wish to pursue a career in the automotive industry.

Unit Standards					
Unit No	Title	Level	Credits	Version	SR/R
16113	Demonstrate knowledge of safe working practices in an automotive workshop	2	2	5	SR
229	Identify the general locations and functions of motor vehicle systems and main components	2	4	10	SR
231	Explain the operation of two and four stroke petrol and diesel engines	2	4	10	SR
21691	Disassemble and reassemble a single cylinder or multi-cylinder four stroke engine under supervision	1	2	2	R
21679	Demonstrate knowledge of interchanging and balancing road wheels in the motor industry	2	2	2	SR
21722	Balance wheels off a vehicle in the motor industry	2	2	1	R
21869	Remove and replace road wheels in the motor industry	1	1	3	R
21719	Remove and replace motor vehicle lamps in the motor industry	2	1	1	SR
	Total NZQF Credits		18		

Vocational Pathways: SR = Sector Related; R = recommended

To receive a Vocational Pathways Award, students must gain NCEA Level 2. Within the 80 credits required to achieve NCEA Level 2, 60 of these Level 2 credits must be from the recommended standards in one or more pathways, including 20 Level 2 credits from sector related standards.

Methods of Assessment Three forms of assessment will be used:	Requirement for Successful Completion: To successfully complete the course, the student must:
 Written tests (students will be advised of date, time and location) Simulated practical tests Practical demonstrations 	Meet all learning outcomes for this course by successfully completing all assessment requirements.