Mechanical Engineering Year 1
2020 Course Outline

Curriculum Goals:
To provide the student with the opportunity to explore and experience the work of a mechanical engineer exposing them to the varied opportunities in mechanical engineering and to assist them 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. In addition, the student will get the opportunity to build a grass kart as their practical project.

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 on engineering worksites.
2. Demonstrate knowledge of safety on engineering worksites.
3. Demonstrate knowledge of MIG welding in the motor industry.
4. Perform basic fabrication operations under supervision.
5. Assemble mechanical components under supervision.

Unit Standards

Unit No	Title	Level	Credits	Version	SR/R
497	Demonstrate knowledge of workplace health and safety requirements on engineering worksites.	1	3	9	R
2387	Assemble mechanical components under supervision	2	2	7	SR
21683	Demonstrate knowledge of MIG welding in the motor industry.	3	2	3	
21911	Demonstrate knowledge of safety on engineering worksites	2	2	3	SR
25075	Perform basic fabrication operations under supervision	2	12	2	SR
	Total DAS Credits		**21**		

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: Four forms of assessment will be used:

1. Group project Produce a 3D CAD drawing
2. Simulated practical tests
3. Practical demonstrations
4. Group project – grass kart build