Year 13 Mechanical Engineering : (13MEC)

NCEA Level:	Year 13
Primary Qualification:	NCEA and Trade Unit Standards
Primary Learning Area:	Technology / Trades Academy
Date:	2020
Teacher:	To be confirmed

Standards on Offer

NCEA Level	Standard Number	Standard Descriptor	Credits	Assessment	Literacy	Numeracy	Vocational Pathways
2	US 2430	Manually produce and interpret engineering sketches under supervision	4	Internal	No	No	M&T
2	US 2432	Manually construct plane geometric shapes for engineering	3	Internal	No	No	M&T
2	US 4436	Select, use, and care for engineering marking-out equipment	4	Internal	No	No	M&T
2	US 21911	Demonstrate knowledge of safety on engineering worksites	2	Internal	No	No	M&T
3	AS 91609	Undertake project management to support technological practice	4	Internal	No	No	C&I, M&T, PI, SC
3	AS 91620	Implement complex procedures to integrate parts using resistant materials to make a specified product	6	Internal	No	No	C&I, M&T, C
		Total Available Credits	**23**				

*Note: Courses are subject to change with the review of courses at the end of each year. Course is **NOT** endorsable.*

Course Outline

Term 1 3 February - 9 April 2020 (10 weeks)	Term 2 28 April - 3 July 2020 (10 weeks)	Term 3 20 July - 25 September 2020 (10 weeks)	Term 4 12 October - early November 2020 (4 weeks)
Course Introduction US 21911 Safety US 2432 Geometric construction US 4436 Marking out AS 91620 Complex procedures	AS 91620 Complex procedures AS 91609 Project management US 4436 Marking out	US 2430 Engineering sketching	US 2430 Engineering sketching
KEY DATES: Week 3: Safety Week 6: Marking out & Geometric construction	**KEY DATES:** Week 10: Complex procedures	**KEY DATES:**	**KEY DATES:** Week 3: Engineering sketching

What will I learn and how will I learn?

Mechanical engineers make things! They use a variety of materials and manufacturing processes to design and build machinery, products and other cool stuff. It's mechanical engineers who make motorbikes, cars, tools, cell phone towers, aluminium boats, wrought iron products and so much more.

The Engineering Industry Training Organisation (Competenz), offers schools genuine industry unit standards at Level 2 and Level 3. These Standards prepare students for real jobs in the engineering industry by developing all kinds of relevant skills and knowledge. Students develop confidence using a variety of hand and machine tools, measuring and welding equipment. This empowers them to work more and more independently and with increasing skill. Students learn to communicate ideas through drawings and plans. This enables them to reproduce products to a high standard or to design and develop their own ideas and share them efficiently with others.

In order to gain Level 3 credits, students will participate in a design process for one of their key projects in conjunction with two Achievement Standards.

Students are taught safe practices in preparation for industry. Caring for our excellent facilities make students part of a long tradition of quality students who can be recommended by Kaitaia College staff to future employers.

Entry

Entry into this subject is by approval from Ms M Green (Head of Learning Area). Preference will be given to students who have successfully completed the Level 2 programme. Please note - numbers are limited on this course.

Conditions for Assessment

All work must be submitted to the teacher by the due date. Any work not submitted for assessment by the deadline will receive a 'Not Achieved' grade. If students are sick on the day their work is due, they must get a doctor's certificate. Read over the student handbook for full assessment details.

Submitting Internal Assessments

Assessments are to be handed in at the end of the lesson on the due date.

Resubmissions and Reassessments

Resubmissions can only be offered once and only when small errors or omissions need to be corrected in their work in a short period of time. There is no further teaching available. Further assessment opportunities are not available in every standard.