

RECOMMENDED LEVEL OF ATTAINMENT

Entry is open but successful completion of Year 10 Materials technology (10MTM/MTW) or 10 Design and Visual Communication (10DVC) is strongly suggested.

INTRODUCTION

This course builds on technology skills learned in Year 10 and is intended to prepare students for apprenticeships in engineering or related trades (such as sheet metal and fabrication or automotive) or develop useful skills and confidence for wide range of satisfying DIY and therapeutic interests and hobbies.

Students will also complete a theory assessment workbooks as they learn but the emphasis is on developing an understanding of practices and techniques to shape, cut and join hard materials (mainly metals) and their physical properties.

This course should be thought of as the first of a two year unit standards pathway designed and monitored by the Engineering Industry Training Organisation (COMPETENZ). Please refer to www.competenz.org.nz/teachers/tools4work/ for more information

CONTENT AND SKILLS

Students will:

- Obtain a sense of achievement and satisfaction through success in craftsmanship and pride in workmanship.
- Understand and apply safe practices, behaviour and procedures in a workshop environment.

- Investigate, develop and communicate design ideas for a simple product using both written and visual modes and media.
- Develop a basic knowledge of workshop tools, machines and processes in measuring, cutting, joining and finishing.
- Apply maths in a trade context. (geometry, measuring, calculating)
- Work to specified tolerances and quality standards, and honestly evaluate against these.

FUTURE PATHWAYS

This is the first of a two-year pathway for students who intend to pursue careers in the Construction and Infrastructure, Manufacturing and Creative strands of the Vocational Pathways at levels 4 – 6 (certificate and diploma levels)

Please refer to Vocational Pathways at <http://youthguarantee.net.nz> for more information.

Students who are interested in Mechanical Engineering should consider this course to complement their other learning in Generic Technology (11Mtm/Mtw or 12Tas) and the Sciences.

COSTS

\$120 will be invoiced in March to cover take home materials and consumables needed to build the projects.

NCEA STANDARDS – 11TPM

Not all standards will necessarily be assessed.

	Level	Credits	L1 Lit.	L1 Num.	
Internal					
22923 v3	1	12	no	no	Demonstrate basic engineering workshop skills under close supervision
22924 v3	1	10	no	no	Develop a simple product using engineering materials
22926 v3	1	2	no	no	Demonstrate knowledge of safety procedures in a specific engineering workshop

RECOMMENDED LEVEL OF ATTAINMENT

Guaranteed entry with 14 Credits from any Level 1 technology course (11MTM/W or 11TPM/W) or at the discretion of the HOD if evidence of satisfactory practical capability and skills can be provided.

INTRODUCTION

Students will also complete a theory assessment workbooks as they learn but the emphasis is on developing an understanding of practices and techniques to shape, cut and join hard materials (mainly metals) and their physical properties. Students can gain recognised Level 2 credits toward a range of engineering related trades administered by Competenz (the Engineering & manufacturing Industry Training Organisation) whilst still at school. Please refer to www.competenz.org.nz/teachers/tools4work/ for more information.

FUTURE PATHWAYS

This is the last of a two-year pathway for students who intend to pursue apprenticeships in the Construction and Infrastructure, Manufacturing and Creative strands of the Vocational Pathways at levels 4 – 6 (certificate and diploma levels)

Please refer to Vocational Pathways at <http://youthguarantee.net.nz> for more information.

A limited number of Gateways placements are available through the careers department for work experience one day per week. These placements gain up to 20 NCEA Level 2, industry-recognised credits, and these placements very often lead to offers of apprenticeships direct from school.

Students who are interested in Mechanical Engineering should consider this course to complement their other learning in Generic Technology (11MTM/MTW or 12TAS) and the Sciences.

CONTENT AND SKILLS

Building on skills started at Year 11, students will develop self-confidence and satisfaction through success in craftsmanship and pride in workmanship and play an active role in ensuring health and safety of self and others in the workplace .

COSTS

\$235 will be invoiced in December to cover take home materials and consumables used.

Students making a grass kart will also be invoiced a further \$300 in advance in March for an engine kit which will be ordered in advance from an overseas supplier. (These are on sold at cost)

NCEA STANDARDS – 12TPM

Not all standards will necessarily be assessed.

	Level	Credits	UE Rdg.	UE Wrtg.	
Internal					
4435 v8	2	3	no	no	Select, use, and care for engineering dimensional measuring equipment
4436 v7	2	4	no	no	Select, use, and care for engineering marking-out equipment
21906 v3	2	12	no	no	Perform basic mechanical engineering machining operations under supervision
21911 v3	2	2	no	no	Demonstrate knowledge of safety on engineering worksites