School of Construction and Engineering Trades

NZ3008

New Zealand Certificate in Collision Repair and Automotive Refinishing (Level 3)

Automotive Student Handbook

NZ Certificate in Collision Repair and Automotive Refinishing (Level 3)

Available on the Programme site on Moodle

This document is correct at time of publishing – February 2025

Table of Contents

School Welcome

Neil McDonald (Head of School)

Nau mai, Haere mai. Welcome to the School of Construction and Engineering Trades.

The School of Construction and Engineering Trades is proud to offer the best range of trades training in the region. Our programmes provide learning opportunities in a comprehensive range of theoretical and practical skills directly related to the workplace and our graduates are in high demand throughout the many industries we support.

The School of Construction and Engineering Trades offers you a learning environment that is as close to the real world as we can make it. Your learning will go beyond the classroom, and you will spend much of your time developing the hands-on skills which you will require if you are to succeed in your chosen field.

Learning at WelTec is a two-way partnership. You will learn from an experienced team of highly respected and professional tutors. They will do all they can to help you while you are here, but your success will not just depend on us.

You must bring with you a keen attitude to your studies, a willingness to learn, and respect for those around you who also wish to learn.

When you immerse yourself in your programme of study with energy and enthusiasm you will leave here with a qualification that will enable you to build your future. I wish you all the best for your studies.

Ngā mihi
Neil McDonald
Head of School

Use of Handbook

This handbook provides important information about your programme of study this year. It outlines what you can expect to achieve and regulations that you need to know about.

The Student Guide provides more information about the services that are available at Whitireia and WelTec to help you succeed in your studies. It refers you to policies and procedures that apply to students. The Student Guide is available in a downloadable version on Moodle and the website and in a printed copy at the School Administration office.

Programme Staff

Tom Dailly (Programme Manager)

Tutor/s

Dean Riches

Resources

Resources Provided:

- Normal Overalls
- Painting overalls
- Respirators
- Steel cap boots
- Resource books

Students to Supply/bring:

- Pens
- Notebook

Programme Aim

This programme will provide students with the fundamental knowledge and skills required to become collision repair component removers and refitters, and/or automotive refinishing preparers, under limited supervision, or similar entry level roles in the collision repair or automotive refinishing industry.

Graduate Outcomes

Graduates will be able to:

1. Follow workplace policies, procedures, and relevant regulations to work safely and effectively in the collision repair and automotive refinishing industry
2. Apply fundamental collision repair knowledge to remove and replace vehicle components to assist with collision repair
3. Apply fundamental automotive refinishing knowledge to repair minor damage and prepare vehicle components for refinishing work.

Employment Pathways

Graduates of this qualification will be able to work as collision repair component removers and refitters, and/or automotive refinishing preparers, or similar entry level roles in the collision repair and automotive refinishing industry.

Programme Outline

This programme will provide students with the fundamental knowledge and skills of Health and Safety requirements, removal and refitting of exterior and interior components, repair of minor damage, and vehicle safety systems required by the collision repair industry to work as removers/refitters of vehicle components, or refinishing preparers under limited supervision.

This is a 120-credit programme, divided up into 8 compulsory courses.

Course	Course Title	Level	Credits
MB3007	Health, Safety and Tools	3	15
MB3008	Cooling and HVAC	3	10
MB3009	Light Engineering	3	20
MB3010	Vehicle exterior and interior components	3	20
MB3011	Critical vehicle systems	3	15
MB3012	Assess for appropriate repair procedure	3	10
MB3013	Repair minor panel damage	3	15
MB3014	Prepare vehicle components for Refinishing	3	15

Health and safety
Health and safety policies, procedures and regulations that ensure consistent safe and effective working practices in the collision repair and automotive refinishing industry

Cooling and HVAC
Removal and replacement of necessary HVAC and cooling systems components

Light engineering
Performing a range of engineering tasks within a collision and /or refinishing repair environment

Vehicle exterior and interior components
Removal and replace interior and exterior vehicle components

Critical vehicle systems
Removal and the replacement of vehicle safety systems, electrical brake steering and suspension systems

Assess for appropriate repair procedure
Assessment of a vehicle for minor repairs

Repair minor panel damage
Repair of minor panel damage on a motor vehicle, within the collision/and or refinishing industry

Prepare vehicle components for Refinishing
Prepare vehicle components for refinishing

Timetable

Teaching weeks:	34	Teaching hours/week:	23
Vacation weeks:	2	Work experience hours/week:	0
		Self-directed learning hours/week:	12.3
Total gross weeks:	36	Total learning hours/week:	35.3

Progress Through the Programme

This programme is completed in one-year, full time.

Award of Qualification

Students must complete all 8 courses listed above to qualify for the New Zealand Certificate in Collision Repair and Automotive Refinishing (Level 3).

Teaching and Learning Methods

The course is to be delivered in an integrated manner and may include tasks in the following settings: workshop, lecture, seminar, online, video, tutorial, self-directed learning, individual work, group work, simulated industry workplace tasks.

The programme will help create, maintain and evolve an environment which fosters active learning, broad thinking, integrity and respectful engagement all of which are valuable within the industry and across the community.

Formative assessment will be used to support learning throughout the course to provide students with regular, prompt and constructive feedback.

Evaluations will also be used in ensuring delivery meets students' needs.

All aspects of the curriculum will conform to the requirements of the provider.

This will ensure students have the opportunity to develop graduate attributes in preparation for employment, further study and participation in society.

Language, literacy and numeracy will be fully embedded to demonstrate a mature stage of ELN practice, where ELN is part of general everyday learning and teaching (Ministry of Education, 2014). This means that existing literacy and numeracy resources, such as the learning progressions framework, are used and the development of students' literacy and numeracy skills are embedded throughout the programme. This will be evident in course material, teaching and learning practice, and self-evaluation processes for ELN quality.

Teaching approaches may include:

Tutorials

Facilitated or led by tutors to provide information and direction and to encourage students to discuss their understanding of the topics, gain clarification of key concepts and provide a platform for further work.

Self-directed

Self-directed learning will enable students to gain independent skills in finding out more about the course content. Students are required to develop reflective skills as they develop the skills. Students will be given a range of study to reinforce their learning while attending courses complete or prepare for written and practical assessments. For particular learning or assessment activities, such as group work, the tutor will be available for support and advice.

Group activities

To facilitate learning through group activities and peer support

Practical demonstration

To facilitate learning by observation and by practice

Project based learning

To introduce students to real work situations and processes

Interactive Lectures

To enable the tutor and students to share and gain new knowledge

Online learning activities

The intention of requiring students to develop competency with eLearning technologies is to prepare them for the workplace using electronic communication as an adjunct to classroom and workshop/lab activity. Students may document their engagement by posting comments and reflections about readings or case studies and scenarios, or to contribute to group problem-solving processes and explore solutions.

Simulated workshop tasks

Enable graduates to be work–ready through the use of real-world examples that require a problem-solving approach. The programme will include learning activities designed to replicate the ongoing professional career development through application of knowledge to authentic tasks. This aligns with the industry specification for the initial education collision repair industry to be engaged in practice.

The methods used in terms of embedding language, literacy and numeracy will be through scaffolding the learning through the contextually driven approaches. Therefore, resources, strategies and activities will clearly demonstrate how the embedding is taking place.

Assessment

The assessment philosophy of this programme of study focuses on promoting and measuring effective student learning. It places value on both formative and summative assessments that establish and maintain appropriate standards of achievement.

The aims of student assessment in this programme are:

- To provide valid and reliable means of evaluating student work in relation to learning outcomes. The standards are those that are acceptable to the wider academic and professional community. The standards are made explicit to students prior to any assessment events.
- To assess development of content knowledge as well as skills and attitudes.

- To promote effective student learning and self-awareness through the provision of clearly understood assessment procedures, constructive feedback and evaluation of student work.
- To further develop students', own critical faculties through their exposure to, and involvement in, assessment processes.
- To develop capability in students for self-evaluation.

Integration of practical and theoretical knowledge is essential to working effectively in the Collision Repair industry. Reflecting this, integrated assessments are central to the philosophy of this programme. Practical scenarios are used to assess skill and knowledge of safe working practices; team projects assess the ability to communicate and attitude; practical skill is assessed in project-based evaluations to ensure workplace readiness of graduates.

Teaching staff is mindful of the impact that workload has on student learning. Integrated assessment may be used in instances where it is possible to assess several outcomes with a common assessment task.

The following assessment methods are used as formative and/or summative tools. Each method identified may be utilised to assess theory and/or practical applications and may utilise on-line learning where appropriate. Both formative and summative assessment of foundational competencies will occur in association with other learning outcomes where appropriate.

Portfolio of achievement

Portfolios may be defined as "a collection of physical evidence of learning and achievements". Portfolios gather all the learning into one place and enable them to present examples and evidence of their work in a coherent way for both assessors and potential employers. Portfolios are employed throughout the programme in several courses. The intention of the Portfolio is for all students to:

- Record examples of their learning process associated with course materials. These entries may be made available for feedback (also known as formative assessment which does not contribute to grading and marks).
- To record and make available evidence for assessments to demonstrate meeting specific course learning outcomes (summative assessments).
- Personal development or planning (used for certification or registration and usually involves a review process, action plan, and recognition of required professional criteria).
- Present or showcase their developing and 'best' work and accomplishments either during study or on work placement.

Portfolio

Assessment for this programme will be project, portfolio based and where possible based on naturally occurring activities. Students may assemble a portfolio of evidence that demonstrates their knowledge and skills. The portfolio may include a range of assessment activities including:

- Tutor observations and attestations of safe working practices, and skills while students undertake project work
- Student generated evidence of, and comments on, assessment activities completed as part of assigned projects
- Tutor led assessment/s for underpinning knowledge
- Assignments
- Self-directed activities

Written examinations or tests

Written examinations or tests may be closed or open-book and are a measure of learning within a controlled environment. Tests are normally completed during a course to ensure that students are

assimilating material as the course progresses. Tests and examinations may include, short answer, multiple choice and/or essay questions.

Practice assessments

These may include simulation of real-life scenarios, demonstration of practical skills and role-playing. Outcomes of practice tasks will be measured against standards that are clearly laid out. Assessment may involve tutor, self or peer participation. Evidence of achievement will be noted into the students' portfolio of achievement.

Peer and self-assessments

Many tasks may lend themselves to peer and/or self-assessment. Peer- and self-assessment reflect both the contexts in which graduating students will work and the practices of working independently and in collaborative teams. They promote the development of reflection and critique and, where employed, will be carried out with agreed and explicit criteria.

Personal Responsibility

We are committed to providing a safe and positive learning and working environments for all students, so everyone can meet their learning goals. You can expect to be treated with fairness, dignity and respect by staff and other students. For further information on what we will provide and what is expected of you as a student please click here

Course outlines

Code	Title	
MB3007	Health, Safety and Tools	
Level	**Credits**	**Pre-requisites**
3	15	Nil
Learning Hours	tutor-directed 96	self-directed 54

Aim

To develop knowledge and skills in applying policies, procedures and regulations that ensure consistent safe and effective working practices when undertaking work in the collision repair and automotive refinishing industry.

Indicative Content

- Emergency procedures
- Hazardous materials
- PPE
- Batteries
- Vehicle protection
- Behaviour
- Ventilation
- Work Habits
- Housekeeping
- Quality Control
- Safe Practices
- Hand Tools
- Machinery and Equipment
- Industry and Manufacturer's Instructions

Learning Outcomes

By the end of this course, students are able to consistently:

1. Identify and follow industry workshop emergency, health, and safety procedures to work safely and effectively.
2. Identify and follow industry workplace policies and procedures to work safely and effectively.
3. Apply relevant industry and manufacturers requirements to use tools and equipment safely and effectively.

Assessments

Grade Method 1

A portfolio of evidence that demonstrates attainment of competence in each assessed focus area is required	
Assessment Methods	**L.O.**
• Practical • Theory assignment	1, 2, 3

Successful completion of course

The student must achieve competency in all assessments.

Code	Title	
MB3008	Cooling and HVAC	
Level	**Credits**	**Pre-requisites**
3	10	Nil
Learning Hours	tutor-directed 64	self-directed 36

Aim

In this course students will be able to identify and where necessary remove and replace HVAC and cooling systems components and store them according to recommended procedures.

Indicative Content

- HVAC systems and components
- Cooling Systems and components

Learning Outcomes

By the end of this course, students are able to:

1. Identify the components and system operation of HVAC.
2. Identify the components and operation of a cooling system.
3. Assess condition of HVAC and Cooling systems and components and remove, replace and store where necessary.

Assessments

Grade Method 1

A portfolio of evidence that demonstrates attainment of competence in each assessed focus area is required	
Assessment Methods	**L.O.**
• Practical • Theory assignment	1, 2, 3

Successful completion of course

The student must achieve competency in all assessments.

Code	Title	
MB3009	Light Engineering	
Level	**Credits**	**Pre-requisites**
3	20	Nil
Learning hours	tutor-directed 128	self-directed 72

Aim

This course develops the fundamental knowledge and skills to perform a range of engineering tasks within a collision and /or refinishing repair environment.

Indicative Content

- Material types and properties
- Principles behind basic fabrication techniques
- Principles behind use of specialist tools
- Basic hand and power tools
- Procedures guiding use of basic hand and power tools
- Specialist tools
- Metal types/properties which may include castings
- Basic fabrication (heating, cutting, welding, threading, fastening systems)
- Drill Sharpening

Learning Outcomes

By the end of this course, students are able to:

1. Explain the principles that underpin the use of hand and power tools and engineering equipment in a collision repair and/or automotive refinishing industry workshop.
2. Use hand and power tools to complete basic collision repair and automotive refinishing industry engineering workshop tasks.
3. Use workshop engineering equipment to complete basic collision repair and automotive refinishing industry engineering workshop tasks.

Assessments

Grade Method 1

A portfolio of evidence that demonstrates attainment of competence in each assessed focus area is required	
Assessment Methods	**L.O.**
• Practical • Theory assignment	1, 2, 3

Successful completion of course

The student must achieve competency in all assessments.

Code	Title	
MB3010	Vehicle Exterior and Interior Components	
Level	**Credits**	**Pre-requisites**
3	20	Nil
Learning Hours	tutor-directed 128	self-directed 72

Aim

In this course, students will select the appropriate tools, products and equipment to remove and replace interior and exterior vehicle components and store them according to company policies.

Indicative Content

- Fastening systems
- Adhering to manufacturer's specification
- Vehicle exterior and interior components.
- Use of appropriate tools to remove, store and replace vehicle exterior and interior components

Learning Outcomes

By the end of this course, students are able to:

1. Identify relevant vehicle exterior components.
2. Identify relevant vehicle interior components.
3. Remove, replace and store vehicle exterior and interior components to assist with collision repair.

Assessments

Grade Method 1

A portfolio of evidence that demonstrates attainment of competence in each assessed focus area is required	
Assessment Methods	**L.O.**
• Practical • Theory assignment	1, 2, 3

Successful completion of course

The student must achieve competency in all assessments.

Code	Title	
MB3011	Critical Vehicle Systems	
Level	**Credits**	**Pre-requisites**
3	15	Nil
Learning Hours	tutor-directed 96	self-directed 54

Aim

In this course, students will select the appropriate tools, products and equipment to remove and the replacement of vehicle safety systems, electrical brake steering and suspension components to manufacturer recommendations.

Indicative Content

- Mechanical
- Electrical
- Remove and replace road wheels
- Brakes steering and suspension components
- Lifting and vehicle support equipment
- Vehicle Safety systems

Learning Outcomes

By the end of this course, students are able to:

1. Identify, remove, and replace relevant brake, steering and suspension components.
2. Identify, remove, and replace relevant Vehicle Safety systems.
3. Identify, remove, and replace relevant electrical components.

Assessments

Grade Method 1

A portfolio of evidence that demonstrates attainment of competence in each assessed focus area is required	
Assessment Methods	**L.O.**
• Practical • Theory assignment	1, 2, 3

Successful completion of course

The student must achieve competency in all assessments.

Code	Title		
MB3012	Assess for Appropriate Repair Procedure		
Level	**Credits**		**Pre-requisites**
3	10	Nil	
Learning Hours	tutor-directed 64		self-directed 36

Aim

In this course, students will select the appropriate tools, products and equipment to assess a vehicle for minor repairs.

Indicative Content

- Tools and materials
- Repair products
- Repair procedures

Learning Outcomes

By the end of this course, students are able to:

1. Identify appropriate tools and equipment to repair minor vehicle damage.
2. Identify correct procedures required to repair minor vehicle damage.
3. Identify correct products required to repair minor vehicle damage.

Assessments

Grade Method 1

A portfolio of evidence that demonstrates attainment of competence in each assessed focus area is required	
Assessment Methods	**L.O.**
• Practical • Theory assignment	1, 2, 3

Successful completion of course

The student must achieve competency in all assessments.

Code	Title		
MB3013	Repair Minor Panel Damage		
Level	**Credits**		**Pre-requisites**
3	15	Nil	
Learning Hours	tutor-directed 96		self-directed 54

Aim

In this course, students will select and use the appropriate tools, products and equipment to repair minor panel damage on a motor vehicle, within the collision/and or refinishing industry.

Indicative Content

- Tools and equipment
- Panel damage repair process
- Body fillers

Learning Outcomes

By the end of this course, students are able to:

1. Repair minor panel damage on a vehicle.
2. Apply and sand body filler on a vehicle panel.
3. Use appropriate tools to repair minor panel damage on a vehicle

Assessments

Grade Method 1

A portfolio of evidence that demonstrates attainment of competence in each assessed focus area is required	
Assessment Methods	**L.O.**
• Practical • Theory assignment	1, 2, 3

Successful completion of course

The student must achieve competency in all assessments.

Code	Title			
MB3014	Prepare vehicle components for Refinishing			
Level	**Credits**		**Pre-requisites**	
3	15		Nil	
Learning Hours	tutor-directed	96	self-directed	54

Aim

In this course students will select and use the appropriate tools, products and equipment to prepare vehicle components for refinishing.

Indicative Content

- Preparation products
- Preparation procedures
- Tools and equipment

Learning Outcomes

By the end of this course, students are able to:

1. Identify and follow industry procedures to prepare vehicle components for refinishing.
2. Identify and use industry products to prepare vehicle components for refinishing.
3. Use appropriate industry tools and equipment to prepare vehicle components for refinishing.

Assessments

Grade Method 1

A portfolio of evidence that demonstrates attainment of competence in each assessed focus area is required	
Assessment Methods	**L.O.**
• Practical • Theory assignment	1, 2, 3

Successful completion of course

The student must achieve competency in all assessments.