

PROGRAMME GUIDANCE for New Zealand Certificate in Exercise (Level 4) (ref 3563 v1) August 2018

Overview and use of guidance

This guidance has been developed in collaboration with the Exercise industry and reflects their expectations for the design and delivery of programmes leading to the award of the NZC in Exercise Level 4 (NZQA ref 3563). Providers developing programmes leading to this qualification should consider this guidance in their programme design to ensure that students and graduates seeking employment, or already employed (paid or volunteering) in the industry, meet the expectations of employers and industry.

If you are developing a programme that leads to a qualification listed on the NZQF, the Education and Training Act requires you to get the programme approved by NZQA. If you are interested in delivering a programme, you also need to be accredited as a provider of that programme.

Once you have finalised your programme, you will need a letter of endorsement from Toi Mai before seeking approval from NZQA.

Please email us at programmes@toimai.nz while you are developing your programme so we can advise you of any new rules, regulations, specifications or conditions since the qualification was listed.

Overview of the NZC in Exercise Level 4

This qualification will provide New Zealand with graduates who have the skills and knowledge to deliver exercise instruction for individuals within the general population. Graduates will operate within a framework of health and wellness in relation to individual, group or community needs and contribute to the cultural, social and economic wellbeing of Aotearoa New Zealand.

Graduates can adapt and deliver appropriate exercise programmes and will have knowledge of exercise training principles and concepts.

Graduates will be eligible to register with the New Zealand Register of Exercise Professionals (REPs).

Within this qualification, health and safety knowledge and skills are implicit in all activities and tasks, including, following industry codes and guidelines.

General Conditions

All learning and assessment within a programme leading to this qualification must be carried out in accordance with the following, as relevant to their role:

- relevant legislation including Health and Safety at Work Act 2015, Privacy Act 1993, and Human Rights Act 1993
- industry codes and standards
- organisational policies and procedures including Emergency Action Plans (EAPs), Standard Operating Procedures (SOPs), and the use of personal protective equipment (PPE).

Pre-requisite/Entry Conditions

It is a recommendation that learners entering this programme should have a baseline anatomy knowledge as covered in unit standard 30636 Demonstrate knowledge of the human body and its movement during exercise and stretching or be able to demonstrate equivalent skills and knowledge

prior to entry. Programme providers may wish to set their own pre-requisites/entry conditions based on the learning and assessment requirements of their programmes.

Award Requirements

Graduates must be able to demonstrate that they have met all of the Graduate Profile Outcome requirements specified within the qualification.

Theory and Practical Requirements

This qualification recommends that the candidate is assessed on planning, designing and delivering programmes for six different exercise participants within realistic industry/community settings to practice and demonstrate competence. The exercise participants must be from at least four different demographics from: male – over 45 years old, male – under 45 years old, female – over 55 years old, female – under 55 years old, pre-screen outcome of moderate risk, or pre-screen outcome of low risk

Industry expectation is that graduates of this qualification will complete a range of 40-60% of this qualification within a practical setting.

Recommended industry publications/standards/websites

There are a number of useful and recommended industry publications and resources which should be referred to and utilised within a programme. These include but are not limited to:

- Exercise Association of New Zealand website, including the Health and Safety Guide for Exercise Professionals - <u>www.exercisenz.org.nz</u>
- NZ Register of Exercise Professionals (REPS) website, including The New Zealand Prescreening Guide and the Code of Ethical Practice www.reps.org.nz
- ACC Sport Smart website www.accsportsmart.co.nz
- Standard Exercise Schedule A <u>www.skillsactive.org.nz</u>
- American College of Sports medicine (ACSM) <u>www.acsm.org</u>
- Personal Trainers Council of New Zealand <u>www.ptcouncil.co.nz</u>
- FitSafe www.fitsafe.co.nz

Skills and Knowledge to be covered per Graduate Profile Outcome

This section of the specifications provides more information on the skills, knowledge and behaviours that should be covered per graduate profile outcome. It also provides a reference to an appropriate unit standard that could be used to assess the outcome if developing a standards-based programme.

Graduate Profile Outcome	Skills, knowledge and behaviours to be covered	Possible unit standards
Core		
Deliver safe and effective exercise programmes, including prescreening, within own scope of practice and industry code of ethics. Credits 5	Principles of exercise What are the principles How they relate to programmes Components of fitness (e.g. strength, cardio) FITT principle Testing Identify which tests for which variable, its risks and the rationale for choosing the test for the client How to interact with participants during testing – privacy, confidential, space, awareness Explain how you can improve testing – variables, reliability, validity Pre-screen, personal details, medical history, disease status, health status, lifestyle habits, exercise habits, exercise intentions, goals, exercise preferences, exercise contraindications, medical clearance Fitness testing, normative data and recording data Reasons for stopping testing Initial baseline test and re-testing Warm up and cool down Different types of stretching Role of stretching for warm up/prepare for training type Role of stretching for cool down/recover for training type Role of stretching for cool down/recover for training type Programme delivery Plan, design and deliver programmes for 6 clients from differing demographics Appropriate physical contact, privacy and confidentiality Professional standards, responsibilities and codes of ethical practice Disclosing conflicts of interest	 30635 Pre-screen, design, deliver and adapt exercise programmes Level 4 Credits 15 30448 Work professionally and safely as an exercise instructor to promote health and wellbeing within an exercise facility Level 3 Credits 8
Apply knowledge of anatomy and physiology to adapt and deliver safe and effective exercise	Structure of skeletal muscle	- 30634 Demonstrate knowledge of human anatomy, physiology and health risk factors
programmes to individuals. Credits 15	 Functions of skeletal muscle muscle action (steps) e.g. eccentric, concentric, isometric force regulation (golgi body) relationship between force, velocity and power in movement basic physics roles of muscles during a movement 	Level 4 Credits 13 - 30635 Pre-screen, design, deliver and adapt exercise programmes

	Energy systems and their functions	Level 4 Credits 15
	 Iactic aerobic anaerobic Anatomy of the lungs, trachea, bronchi mechanics transportation of gasses. Anatomy of the heart, blood flow, arteries, veins, blood pressure mechanics cardiac output and blood pressure Anatomy nervous system, central nervous system and peripheral nervous system mechanics mechanics sensory pathways 	- 30448 Work professionally and safely as an exercise instructor to promote health and wellbeing within an exercise facility Level 3 Credits 8
	 The function of fascia The function of the lymphatic system and the effect muscles have on it Physiological responses to exercise 	
Adapt programmes for apparently healthy people and common at risk groups using exercise science and testing. Credits 10	 Apply industry recognised pre-screen tools such as the REPs NZ industry endorsed evidenced based pre-screen form and guide or equivalent including medical history, disease status, health status, lifestyle habits, exercise habits, exercise history, exercise intentions, goals, exercise contraindications, medical clearance. Review and update exercise plans or programmes and apply relevant progression, regression and modification parameters for apparently health people and common at risk groups that could include obesity, arthritis, diabetes, pregnancy or age specific individuals, groups or communities. Assess risk for exercise and special precautions for exercise programmes. Including adapting exercise intensity and duration, and absolute contra-indications to exercise. Programme design –safe warm ups, positive and negative acute exercise responses to workouts, adjustments according to client tolerance and limitations, monitoring safety, comparison of the design and implementation against programme outcomes. 	- 30634 Demonstrate knowledge of human anatomy, physiology and health risk factors Level 4 Credits 13 - 30635 Pre-screen, design, deliver and adapt exercise programmes Level 4 Credits 15
Apply motivational and communication techniques to enhance individual participant commitment to a personalised exercise programme. Credits 10	 Exercise adherence strategies to support and optimise client performance. Monitoring progress and applying intervention strategies Stages of behaviour change Knowledge, skills, desires needed for behaviour change What exercise professionals can do to enhance or promote behaviour change Exercise professionals role in motivation – how can you improve motivation for your client 	 30637 Apply motivational techniques to enhance exercise participant commitment to individual exercise programmes Level 4 Credits 5 30635 Pre-screen, design, deliver and adapt exercise programmes

		Level 4 Credits 15
Apply a health and wellness framework and evidence based nutrition principles to support a personalised exercise programme and recommend referral pathways to allied health professionals. Credits 10	 Advantages and disadvantages of common dietary philosophies. Understand evidence based nutrition principles in relation to client goals and outcomes. Techniques for gathering nutritional information and summarising data. Nutritional referral pathways to allied health professionals including understanding their scope of practice. When to refer on to other allied health professionals Support your client to implement health and wellness strategies Holistic person-centred approach according to health and wellness framework 	 30638 Demonstrate knowledge of how nutrition, health and wellness frameworks and allied health can promote health outcomes Level 4 Credits 7 30639 Provide support to exercise participants on nutrition, health and wellness, and allied health to promote health outcomes
		Level 4 Credits 5
Use marketing and business tools and techniques to support business practices as an exercise professional. Credits 10	 Business planning, budgeting and tax Target markets Marketing strategies Communication and interpersonal skills Strengths, weaknesses, self-analysis, opportunities, obstacles, expectations Work plan for a work week Attributes of a personal trainer Business processes – fees schedule, promotion, bookings, REPs registration, duty of care, policies, cancellations, insurance, conversion rates and concessions Advantage and disadvantage of different employment arrangements Relevant health and safety legislation and responsibilities Legislation – Privacy Act, Health and Safety Act, Fair Trading Act, Consumers Guarantee Act 	 30640 Develop marketing and business tools and procedures to support business practices as an exercise professional Level 4 Credits 8 30448 Work professionally and safely as an exercise instructor to promote health and wellbeing within an exercise facility Level 3 Credits 8

Assessment conditions and evidence

Within this qualification, health and safety knowledge and skills are implicit in all activities and tasks, including, following industry codes and guidelines.

Further information

This section provides even further detail about what should be covered in a programme:

STANDARD EXERCISE SCHEDULE A

This schedule is included as reference material in specified unit standards for the Exercise Industry. The schedule is intended to reflect desirable entry level exercise knowledge for work in the New Zealand Exercise Industry. The schedule covers a wide range of exercises and exercise descriptions but is not an exhaustive list and it is not intended to exclude those exercises or variations not listed. The exercise and equipment options should be used for guidance rather than a requirement. Exercises can be covered using free weights, body weight, pin loaded equipment, or any other form of equipment which adequately covers the exercises

This Schedule contains

Section 1: Resistance Training Exercises

 Intended for all exercise instruction where resistance using free weights, machines and bands are used. Common free weights include barbells, dumbbells, kettlebells and plates.

Section 2: Bodyweight Exercises

 The section contains bodyweight exercises which do not use equipment to provide extra resistance.

Glossary:

Definitions for muscle groups used in Section 1 & 2.

SECTION 1 - RESISTANCE TRAINING EXERCISES

Area of Body		Major Muscles Targeted			
Targeted	Exercise Name	(Entry Level Knowledge)	Body Position	Variations Suggested	Equipment Options
	■ Lunge	Quadriceps GroupGluteal GroupErector SpinaeAbdominals	Standing		BodyweightFree weightsMedicine ball
Trunk and Legs	■ Squat	 Quadriceps Group Gluteal Group Hamstring Group Sartorius Popliteus Abdominal Group 	■ Standing	Wide squatNarrow squatPartial squat	 Bodyweight Swiss ball (behind back, against wall) Free weights Machine, eg. Hack Squat, Smith Machine
	 Calf Raise (Heel Raise) 	Calf Muscles	StandingSitting	■ Single leg	BodyweightFree weightsMachine
	 Hip Abduction (Side Leg Raise) 	Abductor Group	StandingSide lying		BandMachineLeg weights
Legs	■ Hip Adduction	Adductor Group	StandingSide lying		BandMachineLeg weights
	 Hip Extension (Rear Leg Raise) 	■ Hamstring Group	StandingProne LyingKneeling		BandMachineLeg weightsSwiss ball

Area of Body Targeted	Exercise Name	Major Muscles Targeted (Entry Level Knowledge)	Body Position	Variations Suggested	Equipment Options
Targetea	Leg Curl (Hamstring Curl)	■ Hamstring Group	 Standing Sitting Prone lying Supine lying with Swiss ball 	Single leg	 Band Machine Leg weights Swiss ball
Legs	■ Leg Extension.	 Quadriceps Group 	Sitting	Single on machine	BandMachineLeg weights
	■ Leg Press	Quadriceps GroupHip FlexorsGluteal group	StandingSittingSupine lying	Feet straightSingle leg on machine	Machine
Trunk	Abdominal Curls (Crunches)	■ Rectus abdominus	SittingSupine lyingSwiss ball	 Arms straight (hands to thighs) Arms folded to chest Arms above shoulders (straight or hands touching side of head) Lying supine on Swiss ball Legs on Swiss ball 	Decline boardMachineSwiss ball
	■ Back Extension	■ Erector Spinae Group	Prone lying on floorProne lying on Swiss ball	 Arms held at sides Hands touching sides of head Forearms resting on floor Alternate arm and leg raise 	BenchMachineSwiss ball

Area of Body Targeted	Exercise Name	Major Muscles Targeted (Entry Level Knowledge)	Body Position	Variations Suggested	Equipment Options
0	 Oblique Abdominal Curl 	Oblique Abdominal Group (internal & external)	Supine lyingSide lying	 Arms at sides or reaching towards opposite knee Arms/hands at sides of head Twist legs and hips 	Decline boardSwiss ball
Trunk	Reverse Abdominal Curls (Pelvic Tilt/Hip Lifts)	Rectus AbdominusTransversus Abdominus	 Supine lying On arm support (knee raises on equipment) On Swiss ball 	■ Arms held at sides	Incline boardSwiss ball
Upper Body	■ Bench Press	Pectoral groupAnterior deltoidTricepsSerratus anterior	Supine lyingSitting	InclineDeclineFlatNarrow gripWide grip	Free weightsBandMachineOn Swiss ball
Presses	Push-Ups (Press-ups)	Serratus anteriorTricepsDeltoid groupPectoral major	Prone lying (either full or half press-ups)	InclineDeclineNarrow gripWide grip	Body weightSwiss ball
	Overhead Press (Shoulder Press)	Deltoid groupTricepsTrapezius	StandingSitting on bench, Swiss ball, machine	From chest (military press)	Free weightMachine

Area of Body		Major Muscles Targeted			
Targeted	Exercise Name	(Entry Level Knowledge)	Body Position	Variations Suggested	Equipment Options
Upper Body	■ Dips	TricepsDeltoid group	SuspendedFeet/Arm supported		Body weightMachineFree weight
	Single Arm Bench Row	BicepsLatissimus DorsiPectoralis minor	Kneeling on bench with 1 arm and knee supported.		Free weightBench
• Rows or Pulls	■ Bent-over Row	 Biceps Rear (Posterior) Deltoid Latissimus Dorsi 	 Standing bent over Standing bent over with unilateral support (Dumbbell only) 		Free weightBandMachine
	Seated Row	Latissimus DorsiBicepsRhomboids	 Sitting with trunk support Sitting without trunk support 	 Hands in neutral position Hands pronated Hands supinated Narrow grip Wide grip 	MachineBand
	Upright Row	TrapeziusDeltoids	■ Standing	Narrow gripWide grip	Free weightBandMachine

Area of Body		Major Muscles Targeted			
 Rows or pulls 	■ Chin Ups (Pull ups)	 (Entry Level Knowledge) Biceps Deltoids Latissimus Dorsi Trapezius 	Body Position	 Variations Suggested Hands supinated Hands in neutral position Hands pronated Pull to chest Narrow grip Wide grip Assisted 	Equipment OptionsMachineBodyweight
(cont'd)	■ Lat Pull Down.	 Latissimus Dorsi Deltoids Trapezius Biceps 	SittingKneeling	 Hands supinated Hands in neutral position Hands pronated Pull to chest Narrow grip Wide grip 	MachineBand
	 Lateral Raise 	DeltoidsTrapezius	StandingSitting	■ Single arm	Free weightBandMachine
Shoulder	■ Reverse Fly	 Rear (posterior) Deltoids Rhomboids Trapezius 	 Standing, bent forwards Seated, bent forwards Prone lying on bench 		Free weightBandMachine
Shoulder (cont'd)	■ Frontal Raise	■ Frontal (anterior) Deltoids	StandingSitting		Free weightBandMachine

Area of Body Targeted	Exercise Name	Major Muscles Targeted	Body Position	Variations Suggested	Equipment Options
rargeted	Shrugs	(Entry Level Knowledge)■ Trapezius	Standing Sitting	variations suggested	 Free weight Band Machine
	Flys (Cable Crossover)	Pectoral group	StandingSitting		■ Machine
• Chest	■ Pec Deck	Pectoral groupDeltoids (anterior)	SittingStanding		Machine
	■ Pull-over	Pectoral groupDeltoid groupTriceps	SupineLying	Bent armStraight arm	Free weightMachine
• Arms	■ Bicep Curl	■ Biceps	StandingSitting	 Hands supinated Hands pronated Hands in neutral position (Hammer Curls) Combination (pronated to supinated) 	Free weightBenchBandMachine
	Forearm Curl (Wrist Curls) (Wrist Extension)	Wrist flexorsWrist extensors	SittingKneeling(withforearmssupported)		Free weightBand
• Arms	TricepsExtension	■ Triceps	StandingSittingSupine lying	■ Narrow grip	Free weightBandMachine

Area of Body	Evereine Neme	Major Muscles Targeted	Dody Dosition	Variations Conserted	Faurings and Outlines
Targeted	Exercise Name	(Entry Level Knowledge)	Body Position	Variations Suggested	Equipment Options
		Triceps	Standing		Free weight
			bent-over		Band
	■ Triceps Kick- back		Kneeling on		
			bench with		
			1 arm and		
			knee		
			supported.		

SECTION 2 - BODYWEIGHT EXERCISES

Area of Body Targeted	Exercise Name	Major Muscles Targeted (Entry Level Knowledge)	Body Position	Variations Suggested
	■ Hopping	■ Calf Muscles	■ Standing	 Direction: forwards backwards laterally astride, together Take off + landing: both feet to both feet both feet to one foot one foot to both feet
• Legs	■ Jumping	 Calf Muscles Quadriceps group Gluteal group Hip Flexors 	■ Standing	 Direction: forwards backwards laterally Take off + Landing both feet to both feet both feet to one foot one foot to both feet Onto box
	Running	 Calf muscles Quadriceps group Hamstrings group Gluteal group Hip flexors 	■ Standing	■ In water
• Legs (cont'd)	Skipping	 Calf muscles Quadriceps group Hamstrings group Gluteal group Hip flexors 	Standing	■ With a rope

Area of Body Targeted	Exercise Name	Major Muscles Targeted (Entry Level Knowledge)	Body Position	Variations Suggested
	Kicking	Calf musclesQuadriceps groupHip Flexors	■ Standing	 Direction: forwards backwards laterally Foot: pointed (plantar flexed) heel out (dorsi-flexed) Impact: High impact Low impact
	Raising & Lowering Legs	 Hip Flexion: Quadriceps group Hip flexor group Hip Extension: Hamstrings group Gluteal group Hip Adduction: Adductor group Hip Abduction Abductor group 	 Standing Kneeling with arm support Prone lying Supine lying Side lying 	
• Trunk	Trunk Extension	Erector Spinae	Prone lying	lift upper bodylift legslift opposite arm and leg
• Trunk (cont'd)	 Abdominal Curl (Crunch) 	Rectus AbdominusHip flexors	SittingSupine lyingSwiss ball	 Arms straight (hands to thighs) Arms folded to chest Arms above shoulders (straight or hands touching side of head)

Area of Body Targeted	Exercise Name	Major Muscles Targeted (Entry Level Knowledge)	Body Position	Variations Suggested
	Oblique Abdominal Curl	 Oblique Abdominal Group (internal & external) 	Supine lyingSide lying	 Arms at sides or reaching towards opposite knee Arms/hands at sides of head Twist legs and hips
Arms and Shoulders	Push Up (Press- Ups)	Serratus anteriorTricepsDeltoid groupPectoral major	Prone lying (either full or half press-ups)	InclineDeclineNarrow gripWide grip
	■ Dips	TricepsDeltoid group	Feet/Arm supported	Bent kneeStraight leg

Glossary

Abdominal group Rectus Abdominusm, Transversus Abdominus, Internal & External Obliques

Abductor group Gluteus medius, Gluteus minimus

Adductor group Adductor Magnus, Adductor Brevis, Adductor Longus, Pectineus, Gracilis

Calf muscles Gastrocnemius, Soleus

Deltoid group Anterior Deltoid, Lateral Deltoids, Posterior Deltoid

Gluteal group Gluteus Maximus, Gluteus Medius, Gluteus Minimus, Tensor Fasciae Latae

Hamstring group Biceps Femoris, Semi-membranosus, Semi-tendinosus,

Hip Flexors Iliacus, Psoas

Pectoral group Pectoral major, Pectoral minor

Quadriceps group Rectus femoris, Vastus Lateralis, Vastus Medialis, Vastus Intermedius

Trapezius group Upper Trapezius, Lower Trapezius