

Component Specification

Tractor Operations

NFQ Level 5

5N1742

1. Component Details

| | |
|---------------------------|---|
| Title | Tractor Operations |
| Teideal as Gaeilge | Oibríochtaí Tarracóra |
| Award Class | Minor |
| Code | 5N1742 |
| Level | 5 |
| Credit Value | 30 |
| Purpose | The purpose of this award is to equip the learner with the relevant knowledge, skill and competence to operate a tractor in compliance with recommended standards, European Union (EU) and Irish legislation and good farming practice. |
| Learning Outcomes | <p>Learners will be able to:</p> <ol style="list-style-type: none"> 1 Interpret legal requirements pertaining to the use of tractors and ancillary equipment on public roads 2 Describe procedures for safe and efficient tractor operation to maximise tractor stability on flat, rolling and hilly terrain and surface conditions 3 Interpret safety decals, tractor controls and instrument panels appropriate to a range of work situations 4 Carry out routine pre-starting checks specified in the operator's manual 5 Drive a tractor in a controlled manner in a confined flat terrain evaluating handling to include balance, |

- brake operation, stopping efficiency and handbrake efficiency
- 6 Drive a tractor with a trailed hydraulic coupled implement in a controlled manner appropriate to terrain and surface conditions
 - 7 Drive a tractor with a power take-off three-point linkage machine attached, in a controlled manner appropriate to terrain and surface conditions
 - 8 Load materials using a tractor front end loader in a controlled manner appropriate to the materials being handled and terrain and surface conditions
 - 9 Operate a tractor effectively and in accordance with safety requirements
 - 10 Operate tractor effectively for a range of tractor tasks using ancillary equipment including trailed equipment, three-point linkage equipment and front loaders.

Assessment

General Information

Details of FET assessment requirements are set out in [Assessment Guidelines for Providers](#).

All FET assessment is criterion referenced. Successful achievement of the award is based on learners attaining the required standards of knowledge, skill or competence.

The techniques set out below are considered the optimum approach to assessment for this component. In exceptional circumstances providers may identify alternative assessment techniques through the provider's application for programme validation which are **reliable** and **valid** but which are more appropriate to their context.

Assessment of a number of components may be integrated across programmes for delivery, provided that the learning outcomes of each minor award are assessed.

Group or team work may form part of the assessment, provided each learner's achievement is separately assessed.

All providers are required to submit an assessment plan as part of their application for programme validation. Assessment Plans will include information relating to scheduling and integration of assessment. See current FET validation guidelines at www.qqi.ie.

Assessment Techniques

In order to demonstrate that they have reached the standards of knowledge, skill and competence identified in all the learning

outcomes, learners are required to complete the assessment(s) below.

The assessor is responsible for devising assessment instruments (e.g. project and assignment briefs, examination papers), assessment criteria and mark sheets, consistent with the techniques identified below and FETAC's assessment requirements.

Programme validation will require providers to map each learning outcome to its associated assessment technique. See current FET validation guidelines at www.gqi.ie.

All learning outcomes **must** be assessed and achieved

| | | |
|-------------|----------------------|-----|
| Description | Skills Demonstration | 75% |
| | Learner Record | 10% |
| | Examination - Theory | 15% |

Skills Demonstration

A skills demonstration is used to assess a wide range of practical based learning outcomes including practical skills and knowledge. A skills demonstration will require the learner to complete a task or series of tasks that demonstrate a range of skills.

The assessor will devise a skills demonstration based on learning outcomes 3 - 10. The learner must complete the 25 tasks set out in the list below.

Weighting Factor:

Where a critical fault occurs the entire skills demonstration must be terminated.

0 mark for termination of skill demonstration due to a critical fault or failure to complete the task.

1 mark for completing the task with 3 or more minor faults

2 marks for completing the task with less than 3 minor faults

3 marks for exceeding the criteria for the task with no minor faults

Examples of critical faults: compromises safety, animal welfare, the environment

Examples of minor faults: Incorrect sequence, too slow, requires guidance

The learner must achieve at least 50 of the 75 marks available, to pass this assessment. The learner must pass this assessment to achieve the award.

List of tasks:

1. Carries out safety assessment (hazards, risks and controls) associated with tractor operations
2. Checks tractor for compliance with legal requirements for brakes, cab/frame, lighting and guards
3. Carries out routine pre starting checks specified in operators manual
4. Identifies functions and setting of controls
5. Interprets instrument panel readings
6. Interprets gear selection chart
7. Prepares for and starts tractor engine
8. Checks tractor handling for steering response, brake balance and stopping efficiency, handbrake efficiency
9. Parks tractor
10. Refuels tractor and greasing
11. Checks trailer for compliance with legal requirements for soundness, tyres, tyre pressure, hydraulic hosing, brakes and lights
12. Hitches tractor fitted with pick up hitch or clevis hitch drawbar to a trailer/tanker with hydraulic tipping and/or power take-off shaft
13. Manoeuvres tractor and trailer forward and in reverse through a confined course with variable terrain and ground conditions
14. Parks trailer/tanker safely
15. Parks tractor in accordance with recommended good practice
16. Dismantles, checks and re-fits PTO cover to PTO shaft
17. Attaches implement to the 3 point linkage of tractor in the correct sequence, including connecting power take off shaft
18. Detaches implement from 3 point linkage
19. Carries out safety assessment for loader operation
20. Checks loader for soundness and drivability
21. Changes loader attachments
22. Positions trailer to be loaded to allow minimum loader travel
23. Loads loader attachment and moves loader to trailer
24. Places material on trailer in the correct sequence
25. Parks loader in accordance with recommended good practice

Overall Marks 75

Learner Record

A learner record is the learner's self-reported and self-reflective record in which he/she describes specific learning experiences, activities, responses and skills acquired.

The internal assessor will devise a brief that requires the learner to maintain a learner record for a minimum period of 220 hours work experience. Learners are required to record their application of all learning outcomes in a farm setting. The learner must pass this assessment to achieve the award.

Overall Marks 10

Examination - Theory

An examination provides a means of assessing a learner's ability to recall and apply knowledge, skills and understanding within a set period of time and under clearly specified conditions.

A theory-based examination assesses the ability to recall, apply and understand specific theory and knowledge.

The assessor will devise a theory based examination to assess learning outcomes 1 - 2.

Overall Marks 15

Recognition of Prior Learning (RPL)

Learners may be assessed on the basis of their prior knowledge and experience. Providers must be specifically quality assured to assess learners by this means. To do so they must complete B10, see Provider's Quality Assurance Guidelines and be included on the Register of RPL approved providers. See RPL Guidelines at www.fetac.ie for further information and registration details.

Grading

| | |
|-------------|------------|
| Pass | 50% - 64% |
| Merit | 65% - 79% |
| Distinction | 80% - 100% |

Specific Validation Requirements

There are no specific validation requirements for this award

Supporting Documentation

None

Access

To access programmes leading to this award the learner should have reached the standards of knowledge, skill and competence associated with the preceding level of the National Framework of

Qualifications. This may have been achieved through a formal qualification or through relevant life and work experience.

Transfer

Successful completion of this component award enables the learner to transfer to programmes leading to other certificates where this component is a mandatory or an elective requirement.

2. FET Award Standards

QQI award standards are determined within the National Framework of Qualifications (NFQ), <http://www.nfq-qqi.com>. QQI determines standards for the education and training awards that it makes itself and that are made by providers to whom it has delegated authority to make an award. Providers offering programmes leading to QQI awards **must** have their programme(s) validated in accordance with current validation policy (see www.qqi.ie).

Award standards are designed to be consistent with the NFQ's award classes i.e. major, special purpose, supplemental and minor awards. They are expressed in terms of **learning outcomes** i.e. concise statements of what the learner is expected to know or be able to do in order to achieve a particular award. Learning outcomes for FET awards are contained within the associated specifications:

| AWARD CLASS | STANDARDS | AWARDS |
|--------------------|--------------------------------|---|
| Major Award | Certificate Specification | Certificate (Levels 1 to 5) Advanced Certificate (Level 6) |
| Supplemental Award | Supplemental Specification | Supplemental Certificate (Level 3 to 6) |
| Special Purpose | Specific Purpose Specification | Specific Purpose Certificate (Levels 3 to 6) |
| Minor Award | Component Specification | Component Certificate (Levels 1 to 6) |

Award standards are thresholds, they describe standards of knowledge, skill or competence to be acquired, and where appropriate, demonstrated, by a learner before an award may be made.

Award standards will be reviewed from time to time as necessary. Minor changes may be made by the QQI executive outside the review cycle where necessary. Changes to standards are published on QQI's website. Providers with validated programmes and providers with delegated authority to make awards are responsible for monitoring relevant standards and making necessary responses to changes.

3. FET Credit

Every FET certificate and component specification includes an FET credit value (Table 1). FET credit is quantified in multiples of 5 FET credits (up to 50 hours of learner effort). Learner effort is based on the time taken by typical learners at the level of the award to achieve the learning outcomes for the award. It includes all learning time involved including: guided learning hours, self-directed learning and assessment.

Table 1: FET Credit Values

| NFQ Level | Major Awards Credit Values | Default Credit Values Minor Awards | Other Permitted Minor Award Credit Values | Special Purpose and Supplemental Award Credit Value Ranges |
|-----------|----------------------------|------------------------------------|---|--|
| 1 | 20 | 5 | 10 | |
| 2 | 30 | 5 | 10 | |
| 3 | 60 | 10 | 5,20 | >5 and <60 |
| 4 | 90 | 10 | 5,15,20 | >5 and <90 |
| 5 | 120 | 15 | 5,10,30 | >5 and <120 |
| 6 | 120 | 15 | 5,10,30 | >5 and <120 |

Guide to Level

Learning outcomes at this level include a broad range of skills that require some theoretical understanding. The outcomes may relate to engaging in a specific activity, with the capacity to use the instruments and techniques relating to an occupation. They are associated with work being undertaken independently, subject to general direction.

| Strand | Sub-strand | Nature of learning |
|------------------|-------------------|---|
| Knowledge | Breadth | Broad range of knowledge |
| | Kind | Some theoretical concepts and abstract thinking, with significant depth in some areas. |
| Know How & Skill | Range | Demonstrate a broad range of specialised skills and tools |
| | Selectivity | Evaluate and use information to plan and develop investigative strategies and to determine solutions to varied unfamiliar problems |
| Competence | Context | Act in a range of varied and specific contexts, taking responsibility for the nature and quality of outputs; identify and apply skill and knowledge to a wide variety of contexts |
| | Role | Exercise some initiative and independence in carrying out defined activities; join and function within multiple, complex and heterogeneous groups |
| | Learning to Learn | Learn to take responsibility for own learning within a managed environment |
| | Insight | Assume full responsibility for consistency of self- understanding and behaviour |

Extract from 'Determinations for the Outline National Framework of Qualifications': NQAI