



CCEA Level 1 Qualification in Occupational Studies (Revised)  
CCEA Level 2 Qualification in Occupational Studies (Revised)

(Summer Series) 2014 (Revised)

## Principal Moderator's Report

# occupational studies

*Engineering and Engineering  
Services*



## Foreword

This booklet outlines the performance of candidates in all aspects of CCEA's Level 1 and Level 2 Qualifications in Occupational Studies - Engineering and Engineering Services for this series.

CCEA hopes that the Chief Examiner's and/or Principal Moderator's report(s) will be viewed as a helpful and constructive medium to further support teachers and the learning process.

This booklet forms part of the suite of support materials for the specification. Further materials are available from the specification's microsite on our website at [www.ccea.org.uk](http://www.ccea.org.uk)



## Contents

Principal Moderator's Report	3
Contact details	7



# LEVEL 1 AND 2 QUALIFICATIONS IN OCCUPATIONAL STUDIES - ENGINEERING AND ENGINEERING SERVICES

## Principal Moderator's Report

### Introduction

The Engineering and Engineering Services continues to be a popular pathway within Occupational Studies.

It is pleasing to see the range of practical activities which have been developed to comply with the learner outcomes of the new specification. Unfortunately, a number of centres have not fully embraced the demands of the new specification. This was particularly disappointing when candidates had completed work that was not in keeping with the specification. All centres undertaking Occupational Studies must allow learners to achieve the best possible outcome. This includes giving learners access to appropriate assessment tasks and resources which cover the complete specification.

The AO1 section covers:

#### **Health and Safety at Work (HASAWA)**

Section AO1 contains some common content such as the Health and Safety at Work Act (HASAWA) as it applies to the unit specification.

#### **Careers**

Careers must relate to the occupational content of the unit. Learners should relate this section to careers, job opportunities, annual salary, qualifications required and progression opportunities within the identified career. It is recommended that learners identify three career pathways which relate to the unit of study.

#### **Environment**

Environmental issues should also relate to the curriculum area being studied. Examples of topics which may be covered in this section include, sources of materials used, recycling materials, travel miles used to import products, environmental footprint etc.

The assessment tasks offered within this section must allow learners the opportunity to fully demonstrate their ability. This may include some short multi choice tasks, but learners must also have assessment tasks which demonstrate stretch and challenge. Some of these tasks should have the opportunity for extended writing.

### Practical Outcomes AO2

Legitimacy of learner outcomes is essential. All practical work produced under AO2 must be supported by photographs that record the development of the AO2 project/projects. Witness statements signed by the learner and the teacher/lecturer together with appropriate evidence may also be used. A wide variety of teaching activities and assessment methods were observed resulting in high learner outcomes being achieved by the majority of learners. The degree of complexity outlined in the specification must be reflected in AO2.

## Evaluations A03

This section still needs to be focused on by many centres. Learners tend to provide statements which are descriptive rather than evaluative.

In the majority of centres the learners' diaries were very well presented detailing the learning process and in most cases some reflective evaluations were included which formed part of the assessment for AO3 criteria. However, most moderators reported that marks awarded for learners' evaluation tended to be lenient.

## Internal Moderation/Verification

All units within a pathway must be internally moderated/verified. This was a major problem in many centres. Schools and colleges were able to internally moderate/verify results within individual units or for related units across the pathway, however all units within a pathway must have the same rigor applied relating to learner outcomes. The negative impact of not doing this process correctly is that a unit which has been marked too high will have the results adjusted by the moderation team. These adjustments will pull down the overall marks for a complete pathway.

The grade boundaries in the new specification have changed to the arrangement shown below. A grading model, using Pass/Merit/Distinction, with notional equivalencies to GCSE has been developed.

Level 2	Distinction *	A*	=	180–200 marks
	Distinction	A	=	160–179 marks
	Merit	B	=	140–159 marks
	Pass	C	=	120–139 marks
Level 1	Distinction *	D	=	100–119 marks
	Merit	E	=	80–99 marks
	Pass	F/G	=	40–79 marks
	Unclassified	U	=	0–39 marks

## Basic Fast Fit Operations

This is a very popular unit amongst learners as they themselves will most likely be car owners in the future. The centre needs to be suitably resourced with sufficient units and associated tools and equipment to provide the necessary learning for this unit. It is recommended that centres provide a car to work on for every four learners.

Centres are required to provide supporting photographic evidence in their portfolios of tasks undertaken and completed by learners.

Centres have a good understanding of the unit and have developed a suitable curriculum to cover the specification. Care should be taken to address the careers, environmental and evaluation aspects appropriately.

## Basic Vehicle Body Components and Fitting

This is a very popular unit amongst learners as they themselves will most likely be car owners in the future. The centre needs to be suitably resourced with sufficient units and associated tools and equipment to provide the necessary learning for this unit.

Centres are required to provide supporting photographic evidence in their portfolios of tasks undertaken and completed by learners.

Centres have a good understanding of the unit and have developed a suitable curriculum to cover the specification. Care must be taken to address the careers, environmental and evaluation aspects appropriately.

## Computer Aided Design (CAD)

This unit is also taken up in the Technology and Innovation pathway. Care should be taken to ensure that the application of the basics is not overlooked in this unit, e.g:

- position/spacing of views on page including title block;
- use of first or third projection with appropriate symbols;
- dimensional detail outside of the actual views and suitably positioned; and
- appropriate units and tolerances applied.

Please note; free hand sketches and 3D views are not part of the assessment. Care must be taken to address the careers, environmental and evaluation aspects appropriately.

## Electronic Wiring Installation

This is quite a popular unit amongst learners. Centres need to follow the assessment criteria closely i.e. that all components and connecting cables are surface mounted and fixed to boards using screws and clips. The cables will normally follow horizontal and vertical lines. Since most installation boards are reused it is important that the tasks undertaken and completed are photographed as supporting evidence of the individual learner's achievements. Centres should include this evidence in section AO2 of their portfolios.

## Electronic Circuit Construction

This unit is suited to a learner with a specific interest in this vocational area as it requires a level of discipline, accuracy, neatness and precision to achieve the tasks and activities involved. The components and associated equipment and tools are small and intricate and require concentration and planning to obtain the correct circuitry and functioning of the designated tasks. One advantage with this unit is that it can be carried out in limited space i.e. classroom or lab, provided health & safety can be met.

## Maintenance of Land-Based Machinery

There was limited learner interest in this occupational area and no centres submitted entries for this unit. Centres require considerable resourcing and space to deliver this unit effectively.

## Manufacturing Techniques - Hand Fitting

This was a popular unit with learners in this pathway, developing skills and interest in this vocational area. Centres are generally well equipped and resourced to deliver this unit with a suitable range of tasks used to meet the assessment criteria.

## Maintenance Techniques-Sheet Metal

This was a popular unit with learners in this pathway, developing skills and interest in this vocational area. Centres are generally well equipped and resourced to deliver this unit with a suitable range of tasks used to meet the assessment criteria. A 'box and pan' folder with adjustable fingers is a necessary piece of equipment to have in the workshop to effectively deliver this unit.

## Plumbing

This was a popular unit with learners in this pathway, developing skills and interest in this vocational area as well as in the construction pathway. Centres are generally well equipped and resourced to deliver this unit with a suitable range of tasks used to meet the assessment criteria of the unit. This unit is normally delivered in partnership with further education colleges.

## Vehicle Servicing and Valeting Operations

This is a very popular unit amongst learners. The centre needs to be suitably resourced with sufficient units and associated tools and equipment to provide the necessary learning for this unit (it is recommended that no more than four learners should be working on one car.) Centres are required to provide supporting photographic evidence in their portfolios of tasks undertaken and completed by learners. Centres have a good understanding of the unit and have developed a suitable curriculum to cover the specification. Care must be taken to address the careers, environmental and evaluation aspects appropriately.

## Vehicle Technician Operations

Once again this was a popular unit with learners. The centre needs to be suitably resourced with sufficient units and associated tools and equipment to provide the necessary learning for this unit. Centres are required to provide supporting photographic evidence in their portfolios of tasks undertaken and completed by learners. Centres have a good understanding of the unit and have developed a suitable curriculum to cover the specification. Care must be taken to address the careers, environmental and evaluation aspects appropriately.

## Contact details

The following information provides contact details for key staff members:

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