FEDEC Electrical Skills competition - Level 2

Skills Competition Schedule

Timings	Activity	Location
10:30 – 11:00	Skills competition participants arrival and welcome refreshments	iHub
11:00 – 11:45	Competition briefing and Q&A – Introduction to guest judges: omelectrical, Kimmy the Sparks, and ITS	iHub/ campus
11:45 – 12:30	Lunch	iHub
12:30 – 13:00	Tour and set up	NG13
13:00 – 15:00	Competition	NG13
15:00 – 15:30	Competition de-brief by judges	iHub

Installation Task:

Time allowed for this task is 2 hours. This is to construct and test an electrical installation ready for judges to inspect and score.

All competitors will construct and test the following circuits, ensuring installations meet the requirements as set out in BS7671.

Circuits:

- Install a radial circuit with 2 x single socket outlets using PVC – PVC flat profile 700C thermoplastic sheath cable - clipped direct.
- Install a 2-way lighting circuit using PVC single – core 700C thermoplastic cable installed in PVC conduit.

Guidance:

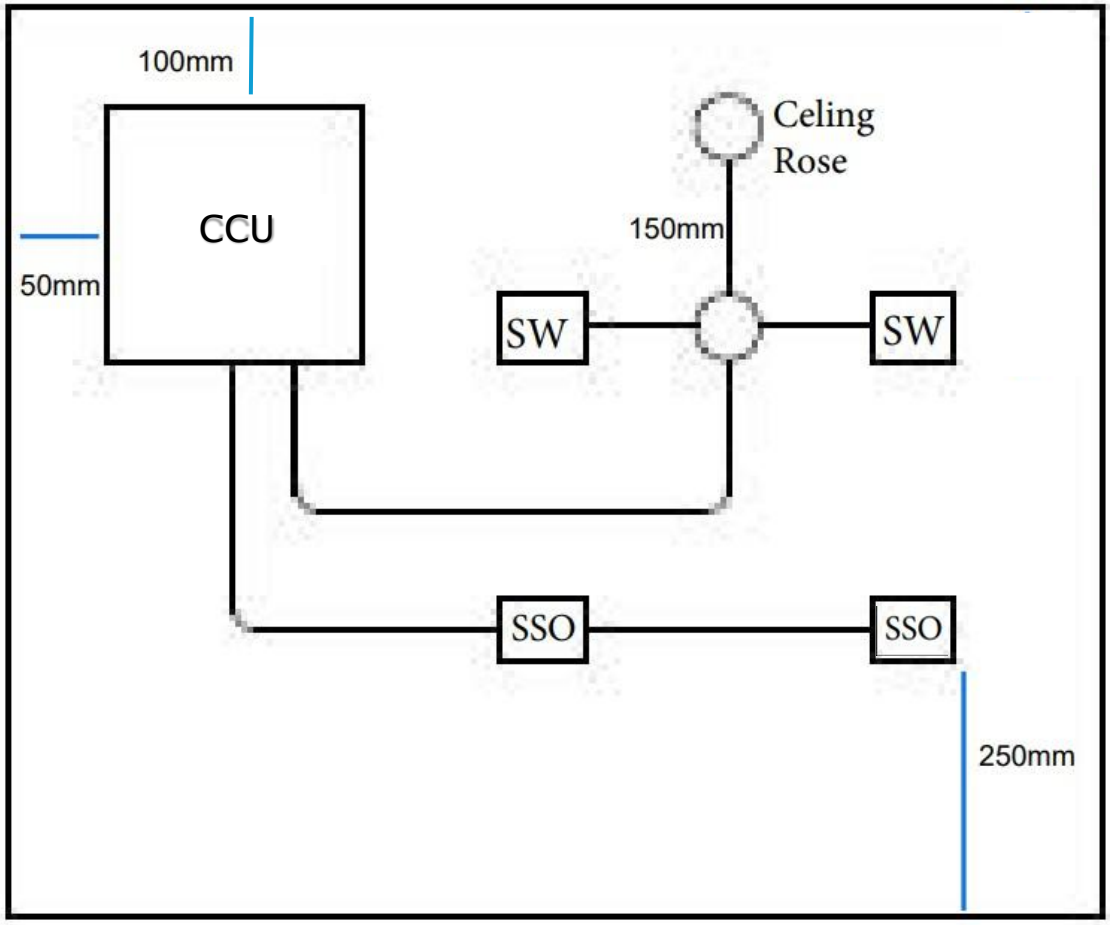
Measurements given are for CCU location and socket outlet height from base of installation boards.

Lighting circuit components are required to be installed equal distant within the space between CCU and right-hand side of installation board, as well as level with base of CCU.

Radial circuit socket outlets are required to be aligned vertically with light switches and installed at the correct height from base of board.

Judges will be looking at accuracy of measurements, are components fitted level, quality of terminations, overall aesthetics, ability to carry out required testing processes and record results.

Installation Diagram:



FEDERATION OF ESSEX COLLEGES

FEDEC Skills Competition 2026

Marking Guide

Assessment Criteria	3 Marks	2 Marks	1 Mark	0 Marks
Accuracy of measurements	All measurements are within ±1mm of the specification. No corrections were identified, and the layout matches the given diagram accurately.	Measurements are within ±2mm of the specification. One correction was identified, but it does not affect the overall functionality or final layout.	Measurements are within ±5mm of the specification. Two or three corrections were identified, and the layout deviates slightly from the specification.	Measurements deviate by more than ±5mm. More than three corrections were identified, or the layout does not match the specification in a way that impacts functionality.
Quality of component alignment and installation	All components are aligned to within ±1mm of the specified positions. Fixings are tight, secure, and components are level and plumb.	Components are aligned to within ±2mm of the specified positions. Fixings are secure, with slight unevenness in one or two components.	Components are aligned to within ±5mm of the specified positions. Fixings are reasonably secure, though some movement is present, and multiple components are slightly uneven.	Components are misaligned by more than ±5mm. Fixings are loose, and components are visibly slanted or not level, failing to meet the installation standard.
Overall aesthetics of the installation	Installation is visually professional with no visible damage, all cables neatly clipped at regular intervals on horizontal and vertical runs, and all terminations are clean and consistent.	Installation is visually neat, with only slight inconsistencies such as uneven cable clipping at one or two points, or minor scuff marks.	Installation has visible flaws, such as uneven cable clipping, loose cable ends, or terminations that appear untidy.	Installation is untidy, with cables left unclipped, terminations that are not properly made, and significant visual flaws, such as damage or improper cable management.
Testing processes and results	All testing processes are completed in the specified sequence. Results are accurate, fully recorded, and meet all expected values without errors.	Testing processes are mostly completed in the correct sequence, with up to one deviation. Results are recorded accurately, with one value requiring clarification.	Testing processes are partially completed, with two or more deviations. Results are recorded, with one or more values requiring clarification.	Testing processes are not completed or completed incorrectly. Results are either not recorded or are inaccurate and do not meet expected values.
Completion of functional testing and recording of results	Functional testing is fully completed, with detailed recordings that meet all specifications and confirm correct circuit operation.	Functional testing is mostly completed, with one or two results missing or requiring corrections that do not affect overall circuit functionality.	Functional testing is partially completed, with three or more results missing or incorrect, affecting circuit functionality.	Functional testing is not completed, or the recorded results entirely fail to demonstrate circuit functionality.