

Mechanical Engineering: CAD

Competition brief

Entry requirements

The competition is intended for those working and/or training towards relevant programmes of study in 3D Computer Aided Design. Competitors can be in education and training or working in industry. The competition is open to the following levels:

Advanced: Those undertaking qualifications up to level 3 (for England, Northern Ireland and Wales), up to level 6 (for Scotland) or up to five years experience in a working environment.

Higher: Those undertaking qualifications up to level 7 (for England, Northern Ireland and Wales), up to level 10 (for Scotland) or up to seven years experience in a working environment.

WorldSkills London 2011 eligibility criteria

The rule for the WorldSkills Competitions states that competitors are required to be under the age of 23 in the year of the competition; This means that for the WorldSkills London 2011, competitors must be born on or after 1 January 1989.

There are no restrictions on how many competitors can enter from each organisation.

Competition structure

Stage one: enter online at www.worldskillsuk.org by **19 March 2010**. An example test piece can be downloaded on the CAD competition web page.

Stage two: competitors will be invited to compete in a one day regional heat in May 2010 (venues to be confirmed).

Stage three: highest scoring competitors from across all heats that meet the required standard will be invited to compete in a two day live UK final.

About the competition

Competitors may use Autodesk Inventor or Solidworks software to complete the tasks.

Competitors should be fully conversant with BSI/ISO drawing standards and be able to use them effectively in different situations.

Stage one: organisations may enter as many competitors as they wish by **19 March 2010** at www.worldskillsuk.org. An example test piece can be downloaded on the CAD competition web page.

Stage two: competitors who have entered the CAD competition will be allocated to a heat across the UK. Both the heats and the UK final will test a competitor's performance using CAD to produce 2D technical drawings, 2D Assembly drawings, 3D Models and 3D Assemblies. In addition, Higher level

competitors will be required to produce animations and include GDT (Geometrical Dimensioning and Tolerancing) in technical drawings.

The competition tasks are defined by the level of entry:

Advanced:

- Use parametric modeling techniques to produce parts.
- Create an assembly from modeled and given parts.
- Produce exploded views and drawings.
- Produce technical drawings from a given part.

Higher:

All of the above plus:

- Produce animations of moving assemblies.
- Produce animations of exploded views.
- Produce technical drawings with GDT.

Stage three: the top five highest scoring competitors from stage two (per level) will be invited to attend the UK final which will last 2 days (12 hours). The competition will reflect Worldskills International standards.

Marking and assessment

- The competition brief will include a breakdown of the marking criteria.
- The marking criteria will reflect the relevant significance of each.
- Assessment will be through inspection and interrogation of the project produced.
- Each competition task will be assessed and marked independently of each other task.
- Each task will be assessed and marked in accordance with general and specific competition rules.
- All competitors will receive notification of their assessment outcomes.

Contact details

For technical advice about the competition contact:

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For general information about competitions please contact the WorldSkills UK contact centre:

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Web: www.worldskills.org