

12TH PROVINCIAL SKILLS COMPETITION

2009 SKILLS CANADA NEWFOUNDLAND AND LABRADOR



05

MECHANICAL CAD

Scope Document

Post Secondary

Friday, April 3th, Academy Canada, Kenmount Rd – St. John's

Note : Each registered school may enter 3 competitors

Duration of Contest: 5 hrs.

PURPOSE OF THE CHALLENGE

To evaluate each contestant's preparation for employment in the field of Engineering Design and Drafting using CAD and to recognize outstanding students for excellence & professionalism in their field.

SUBJECTIVELY TESTED SKILLS AND KNOWLEDGE

- Demonstrate knowledge of material designations based on their function within a simple mechanical assembly.
- Select fasteners and other assembly components as required (pins, keys, snap rings, etc.).
- Use CAD software to produce drawings that comply with the following standards:

–CAN3-B78.1-M83(R1990)

–CAN/CSA-B78.2-M91

–B97.3-M1982 (R1992)

–B97.3-1970 (R1992)

- Use CAD software to produce 3D parametric models.
- Use measuring instruments.
- Dimension and tolerance drawings to industry standard
- Animation

EQUIPMENT, TOOLS, SUPPLIES, CLOTHING

Equipment provided by the organization:

- IBM-compatible micro-computer, monitor and mouse: All supplied equipment will be identical for each contestant.
- No computer may be brought on site.
- Software:
 - AutoCAD 2008
 - Autodesk Inventor Professional 2009
 - Measuring instruments
 - Solid Works

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Contestants who want to use other software must formally request approval from the Provincial Technical Committee at least 14 days prior to the competition.

- Approved software must be supplied to the Provincial Committee 14 days prior to the competition.
- Only licensed software will be accepted.
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Competitors MUST bring the following:

- Calculator
- Reference materials (no photo copies or hand written notes)
- Pencils
- USB memory stick

Note: all other equipment must be approved by members of the National Technical Committee

COMPETITION TASKS

- 1) Sketching and Part Measuring
- 2) Detail drawing from Assembly and Blueprint interpretation.
- 3) Assembly from Details.
- 4) Parametric Modeling

POINT BREAKDOWN / 100 TOTAL

Evaluation Criteria:

- Presentation
- Sketches
- Dimensioning tolerancing, geometric tolerancing.

Note: a detailed evaluation will be given when the contest is finished.

No competition challenge details will be released prior to the competition date.

In case of a tie, the winner will be determined by rank order of the highest weighted task.

PROVINCIAL TECHNICAL COMMITTEE

Mike Kerfont (Chair)	Academy Canada	mkerfont@academycanada.com
Rajendra Jani	College of the North Atlantic	Rajendra.Jani@cna.nl.ca
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