



2012 Provincial Skills Canada Competition

Scope Document

Edmonton Expo Centre, Edmonton

May 10 & 11, 2012

EVENT: CNC Machining	LEVEL: Post-Secondary
COMPETITION START TIMES: May 10: ORIENTATION: 8:00AM – 9:00AM COMPETITION: 9:00AM – 4:00PM May 11: COMPETITION: 8:00AM – 3:00PM	LOCATION: Hall C, Edmonton Expo Centre, Edmonton
DURATION: 12 Hours (over 2 days)	
WORLDSKILLS TRADE #: 06	

GENERAL DESCRIPTION

A machinist uses machine tools to manufacture parts from raw material for a variety of industries. Nearly all consumer goods have been machined or are manufactured from tools or equipment which has been manufactured by a machinist.

Purpose of the Challenge:

Assess the competitors CNC Programming and Machining skills and trade knowledge through theory and practical testing.

Skills and Knowledge to be Tested:

The contest will occur over two days (12 hours of competition). On the first day of competition there will be 1 hour of professional consultation followed by 3 hours of machining, a 1 hour Machining Centre MasterCam exam and a 1 hour theory exam. On the second day there will be 3 hours of machining, a 1 hour Machining Centre MasterCam exam and 1 hour theory exam. The machining section of the competition involves machining projects using a CNC turning centre and CNC machining centre.

PROJECT DESCRIPTION

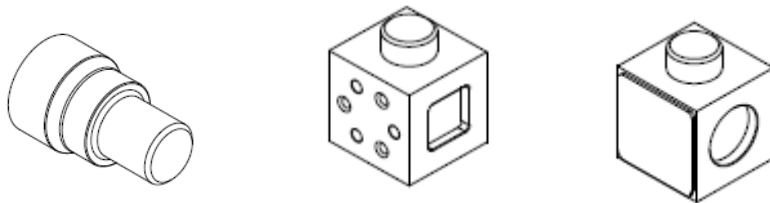
CNC Turning Centre (Haas Control)

- Safe operating procedures
- Applied Metrology
- Word Address Programming
- Appropriate sequence of operations
- External and Internal cylindrical turning
- Taper turning
- Threading (straight & tapered, internal & external)

CNC Vertical Machining Centre (Haas Control)

- Safe operating procedures
- Applied Metrology
- Word Address Programming
- Appropriate sequence of operations
- Profile, Pocket and Thread milling
- Hole operations

SKILLS20



EQUIPMENT & MATERIALS

Equipment and Materials Competitors Must Supply:

- CSA Approved Safety Glasses
- CSA Approved Steel Toed Footwear
- Shop coat (coveralls)
- Ear Plugs
- Competitors are required to follow all industry safety standards during the competition

***Competitors will not be allowed into the competition area without the required safety equipment.**

Equipment and Materials Supplied by the Committee:

- The following will be supplied to each contestant:
 - Haas Turning Centre and Machining Centre.
 - All appropriate measuring tools for the CNC project.
 - All appropriate tooling for CNC machines
 - Hand Tools.
 - Required reference materials
 - Project Materials
 - Mild Steel
 - Aluminum

Notes:

- **The contestants may be required to share some of the supplied tools and equipment.**
- **The CNC machines will have the appropriate tooling and tool length information established prior to the start of the competition.**

SAFETY

The health, safety and welfare of all individuals involved with Skills Canada Alberta are of vital importance. Safety is a condition of participation with Skills Canada Alberta and shall not be sacrificed for the sake of expediency. At the discretion of the judges and technical committees, any competitor can be denied the right to participate should they not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.

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JUDGING CRITERIA

Points Breakdown

	Mill	Lathe
Project Completion	50	50
Compliance with Occupational Health and Safety regulations	50	50
Compliance with dimensions, tolerances, and fits as specified in plans	600	600
Theory Exam & MasterCam Exam	300	100
Compliance with appropriate surface finish and deburring	100	100
	1100	900
	Total 2000	

Note:

If a second work piece blank is required, the contestant will lose 120 points from the 600 point section.

TIE BREAKING PROCESS

The time required by the contestants to complete their projects will determine the tie breaker.

RELATED CAREER AND TECHNOLOGY STUDIES COURSES

Descriptions of all modules are located at the following website:

<http://www.education.gov.ab.ca/cts>

FAB1130: Principles of Machining

FAB2150: CNC Turning

FAB3150: CNC Milling

AIT: ILM's

ADDITIONAL INFORMATION

Lunch Schedule

May 10th – 12:00pm to 1:00pm

May 11th – 11:00am to 12:00pm

Lunch for accredited competitors only will be provided by Skills Canada Alberta.

Parking & Venue Maps

<http://www.edmontonexpocentre.com/attend/parking/>

Awards Ceremony

The awards ceremony will take place on Friday May 11, 2012 at 5:30pm in Hall D of the Edmonton Expo Center. Admission is free and everyone is welcome to attend. The awards ceremony will be shown live at www.skillsalberta.com.



20th ANNUAL PROVINCIAL SKILLS CANADA COMPETITION

SKILLS20

Team Alberta Information

Team Alberta will be selected at the Provincial Skills Canada Competition (PSCC) on May 10-11, 2012. Then two days later the gold medalists from PSCC will compete at the Skills Canada National Competition (SCNC) in Edmonton, Alberta. It is recommended that competitors review the SCNC scope documents to be familiar with the national scope and project. <http://www.skillscanada.com>.

During the PSCC Awards Ceremony on May 11 all students who earn a medal will be escorted backstage after we photograph their onstage moments of success. Gold medalists will be given their Team Alberta information package and will confirm their participation in the SCNC.

Students must be present at the Awards Ceremony to claim their position on Team Alberta. If the Gold medalist is not able to attend SCNC, the next top ranking individuals will be asked to participate.

COMMITTEE MEMBERS

Ryan Reeves (Committee Chair)	NAIT
Reece Burdeniuk	Argus Machine
Dave Grabski	NAIT