



Automated Manufacturing Contest

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RE: Iowa 2016 SkillsUSA contest, April 28th-29th 2016

Dear Contestant and Advisors:

Thank you for participating in the upcoming SkillsUSA contest. It is our goal to make this contest a rewarding experience for everyone involved. Please do not hesitate to contact us if you have any questions or concerns.

In the machining trades we will have Four contests this year that will have teams from high school and post-secondary schools, the contests are **Automated Manufacturing, CNC Technician, CNC Milling, and CNC Turning.**

On the evening of **April 28th, 2016** we will have an optional simulator familiarization from **6:00pm to 8:00pm** for the contestants using the Haas Simulators for the CNC contests. The same night and time we will have set-up for the Automated Manufacturing contestants who are bringing their own CNC and laptop computers.

On the back is a general schedule for the contest. See the attached list of items to bring and skills required for the contest. **Remember to create and bring a resume** because points are awarded for this. Please share this information with your instructor and/or advisor. A box lunch will be provided for both judges and contestants during our lunch period.

If you have any question or concerns please e-mail or call.

Sincerely,

Dennis Knittel

April 28th

CNC

Auto MFG

6:00-8:00 P.M.	Familiarization with machines	CNC set-up for the Automated MFG

April 29th

7:20 -7:45	Judges meeting - room 120	Judges meeting - room 120
7:45 to 8:10	Contestants / instructors meeting - room 120 Judges to inspect contest stations.	Contestants / instructors meeting room 120 Judges to inspect contest stations.
8:15-9:15 A.M.	Session 1 CNC Tech – lathe programing - room 106 CNC Mill – mill programing - room 106 CNC Lathe - Inspect /Bprint – room 122	Session 1 room 104
9:15-9:25 A.M.	ROTATE TO NEXT STATION	
9:25-10:25 A.M.	Session 2 CNC Tech – Inspect /Bprint – room 122 CNC Mill – mill programing - room 106 CNC Lathe - lathe programing - room 106	Session 2 room 104
10:25-10:35 A.M.	ROTATE TO NEXT STATION	
10:35-11:35 A.M.	Session 3 CNC Tech – mill programing - room 106 CNC Mill – Inspect /Bprint – room 122 CNC Lathe - lathe programing - room 106	Session 3 room 104
11:35-11:45 A.M.	ROTATE TO NEXT STATION	
11:45-12:15 A.M.	LUNCH room 121	LUNCH room 121
12:15-1:15 P.M.	Session 4 all groups - CNC /math - room 121	Session 4 all groups - CNC /math - room 121
1:15-1:45 P.M.	clean	clean

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What to Bring:

- safety glasses
- scientific calculator
- personal resume
- CNC mill
- CAD software and computer of choice
- CAM software and computer of choice
- Heavy extension cord(s) if possible (I will have some available)
- measuring tools (I have toolkits with measuring tools if you want to use them)
- ¼ end mill cutting tool capable of cutting ½” deep. ¼” diameter (.125 radius) ball end mill (I will also have some available if needed
(work piece material: machinable wax)

What is Provided:

- box lunch
- mill cutting tools
- workpiece material
- workpiece prints

Skills And Tested Areas:

- CAD design (team effort)
- CAM programming (team effort)
- CNC set-up and operation (team effort)
- Print reading (blueprint, line types, dimensions, tolerances)
- shop-related math (add and subtract dimensions, right-angle trigonometry)
- CNC test (common G & M codes used for manual programming)