The following rules are for the state contest only. Students/Teams that qualify for the national contest need to adhere to the rules and guidelines for that national contest. The rules can be found in the Skills USA Championships Technical Standards available from SkillsUSA Publication Sales. For both state and national contests, you should also watch for contest updates sent from the Wisconsin SkillsUSA state office. For national contests, you can find contest updates at the national SkillsUSA website.

ENGINEERING TECHNOLOGY/DESIGN

Purpose: To recognize an outstanding engineering innovation project which has been developed by a team of engineering students. The student team will present their innovative idea along with a display and live model.

GENERAL REGULATIONS

People entering this contest must follow all rules listed below as well as the **"General Regulations"** of the Wisconsin Skills Championships. The "General Regulations" can be found at: http://www.skillsusa-wi.org/wordpress/?page_id=130. You will be held accountable for knowing and following all rules and guidelines of the Wisconsin Skills Championships.

Clothing Requirements

For men: Official red blazer, windbreaker or sweater, black dress slacks, white dress shirt, plain black tie, black socks and black shoes.
For women: Official red blazer, windbreaker, or sweater, black dress slacks or skirt, white collarless blouse or white blouse with small, plain collar that may not extend onto the lapels of the blazer, black sheer or skin tone hose and black shoes.

Eligibility

Open to active SkillsUSA members enrolled in a career and technical education engineering or program that integrates engineering/pre-engineering techniques as an integral component of the instructional program.

Observer Rule

No observers will be permitted during the judging phase of the team presentation. Live models and presentation displays may be viewed on the day of the competition. All teams will be invited to repeat the team presentation to the public following the judging phase.

Equipment and Materials

SkillsUSA will provide:

- a space for the live model no bigger than 10' x 12'
- a space for the storyboard
- one standard 120 volt electrical outlet, you must inform the State Assistant Director upon registration of the National Website.
- one standard 8' conference table

Supplied by the contestant team:

- live model cannot be hazardous in any way.
- if the live model is not conducive to being presented in an indoor facility, please notify headquarters in advance so other arrangements can be made.
- live models must be transported, and set-up in the contest area by the contestant team. No help will be provided by SkillsUSA.
- Resume for each team member must be presented to the judges at time of presentation.

Scope and Contest

A team consisting of 3 students, all enrolled in the same educational institution during the current year.

Students may be members of only one team per contest year.

The project must be designed and constructed by students who are (or were enrolled immediately preceding the NLSC) enrolled in an engineering program (see definition in the eligibility section).

Each team will have one storyboard explaining the new innovation they collaborative worked on. Each storyboard maybe smaller than, but not exceeding a maximum of 4' x 4'.

The live model must be an accurate reflection of is being claimed in the oral presentation.

Importance is placed on the oral presentation which lasts no longer than ten minutes.

Following the oral presentation, there will be a possible ten minute question and answer session by the judging panel to clarify any questions that arise during the presentation.

High school and post-secondary/college educational institutions are eligible to participate.

Leadership from the team's career and technical instructor, academic teachers and business/industry is highly encouraged.

The panel of judges will consist of; engineers, engineering educators and members from business and industry.

Judging Criteria

Each engineering presentation will be judged according to its own merits and compliance with the listed criteria. Participants should read the guidelines carefully and make the sure the project presentation covers all the criteria.

Live model – The live model is a working model that demonstrates the results of the teams' research and how the team has put their research into action (i.e. and newly designed air-intake system for a high mileage vehicle). The live model must accurately reflect the engineering design accomplishment referred to in the presentation. If judges wish, they will be able to inspect the model at the conclusion of the presentation.

Presentation – Students should demonstrate appropriate mastery of the engineering project. Each student should take an equitable role during the allotted time. The presentation given by the entire group should reflect excellent presentation skills, clear communication and explain technical process related to the engineering innovation and design project. The use of technology presentation equipment is highly encouraged to convey a clear presentation.

Integration of business and industry – The project must demonstrate evidence of the integration and involvement of business and industry related to the engineering field. This involvement might take many forms (i.e., technical assistance), but must be evident during the presentation process. The team must have engaged business and industry in at least one phase of the project – research, planning, and construction of the model or assistance in a quality presentation.

Storyboard presentation model – The storyboard will chronicle the history of the innovation from idea to reality. The storyboard will be rated on gaining attention, explaining the engineering process involved, quality, imagination and overall effectiveness as a history of the project.

Overall effect – the entire presentation and supplied materials (i.e., storyboard, live model, etc…) were projected in a businesslike and professional manner. The live model and presentation materials were well organized, the students display knowledge of and clear connection to engineering business/industry has been firmly established.

See Rubric on Contest Guidelines located next to Engineering Challenge link! Rubric.pdf