

HOW TO WIN A TOP AWARD IN THE IHA STUDENT DESIGN COMPETITION

Based upon an outline written by Peggy Howe, IDSA, on behalf of the 1997-98 juries

Think of your entry to this competition as an opportunity to demonstrate your industrial design skills to a potential employer. Your abilities to think, problem solve, and communicate your ideas are most important. This is also a chance to showcase your excellent sketching, research, computer drafting, and model making skills.

1. Have your instructor review your entry form before it is submitted and allow enough time for making corrections and improvements.
2. Answer all of the questions on the form. Do not include your name, your school's name, or your instructor's name anywhere in the submission but on the first page where required.
3. Use a computer to prepare the written part of the entry and use a spell check program.
4. In a clear and visual manner, demonstrate all features. Show how parts move, where to insert the hand or have physical interaction with the product, and where the motor or important components are positioned. Do not show only the "shell."
5. Make a clear, compelling argument for your human factors claims. Use mock-ups or other visual methods to explain. Show a side-by-side comparison with an existing product to highlight the improvements featured in your design. Example: a beautifully styled and detailed vacuum cleaner will not win an award if the handle has not been designed with good human factors consideration. Show visual examples (sketches, photos of mock-ups, competitive products you looked at) of the thought process you went through to arrive at the final form of the handle or other feature. Show center-of-gravity or weight distribution studies if necessary.
6. Be certain that your product solution is simple and intuitive to use. The jurors will eliminate a product that is very difficult for the consumer to understand. Does the user need to go through an elaborate process to use the product effectively? Will the user need extensive training to understand how to operate the product? The use of the product should be intuitive.
7. The product should be safe to use. Show examples that prove that you have considered and addressed safety issues. Do not claim that the product is designed for the elderly and then present a product with exposed knife blades, difficult-to-read controls, or slippery grasping surfaces.
8. Research products already on the market. Go to a store and photograph a group of products that are similar to the product you are working on. Better yet, show a photograph of a competitive product with someone from your user group actually using the product to do the intended task it was designed to do. Then compare your new solution with the existing product. Be sure that your design offers some clear advantage over the existing model. It is helpful to verbally list, or show visually in chart form, all of the product model names that you have evaluated. Don't just submit a photocopied page from a Dreyfuss human factors book and call that research. Demonstrate that you have attempted to apply the information by showing sketch models, etc.
9. It would not hurt to contact a marketing person at a key retailer to discuss your product concept. Such a person might be willing to give some free advice and help direct your research efforts. Some students have also conducted surveys by Internet to test their ideas.
10. Be sure that you are submitting a fully developed product design solution, rather than just a product idea or concept. Each year there are entrants who claim that his/her product will "revolutionize the industry," yet they submit an entry that is missing sketches, research, research, model, mention of appropriate materials, or a clear presentation of their "vision." Some products seem to be produced by magic. There is room for a product that cannot yet be produced with today's technology, but please present your research to indicate that your idea is possible.
11. Try not to present a product that is "over-designed." Sometimes an existing design is clearly superior to the product submitted because it demonstrates a pure use of materials, or for other reasons of simplicity. Be sure that your proposed solution does not use excessive materials, does not contain too many parts, and is not too complex for the intended purpose. Try to get honest opinions from your instructor, as well as from non-designers to test the validity of your new product.
12. Be sure all skill areas are covered. An entry that is hand-written and includes only a computer rendering with no backup material will not be considered for an award. Organize your materials neatly into a booklet.

CHARACTERISTICS OF AWARD-WINNING ENTRIES

Although characteristics of winning products vary, projects selected include these elements:

- All or most of the requirements were well satisfied.
- Goals for the project were clearly defined and solved.
- The research was thorough and presented well, verbally and visually.
- The design and thought processes were well-communicated in concept sketches. The student demonstrated a clear understanding of appropriate materials and processes.
- Most of the design features were detailed to an acceptable level.
- Mechanical drawings showed internal components and demonstrated how the product was assembled.
- A final concept was fully explained through renderings, computer visualizations, a polished final model, and an overall good presentation.
- The product claims were well-documented and substantiated. The entry was neat, well-organized, well-researched, and well-photographed. The image submitted clearly showed the product features.
- If the product was specialized, it was well-developed.
- If the product was in common use, there was one element that set it apart from existing products.
- A traditional problem was solved in a new way.
- It was not just a styling exercise.
- The product solved a real problem that had never really been looked at before.
- The product was truly innovative with a new technology, material, or manufacturing process.
- The solution was simple and elegant.
- The solution had a compelling quality to it. It may have been very clever, very cute, or very likely to distinguish itself in a crowded market.
- An integrated solution was presented. Nothing looked “stuck-on.” Details were well developed.

Checklist for Entry Preparation

Be sure to include all of the elements in your submission.

- ✓ **Problem Statement** You should clearly state your goals for the product. Clearly state what problem you are attempting to solve. Do not include, verbatim, your instructor’s assignment to the class.
- ✓ **Research** Make references to human factors materials and specific product or manufacturing information (secondary research). Evaluate competitive products. Include firsthand (primary research) observation and perform the task yourself. Show users interacting with your sketch models or prototypes. Do not prompt them for a positive response. Try to get honest feedback, giving yourself time to change the direction of your final solution. Verbal and visual descriptions of this activity are important.
- ✓ **Concept sketches** Drawings and sketch models should show your concept process. Include a demonstration of suitable explorations. Show your thought process. Consider alternative material and processes directions. Show details. Sketch models should also be included, even if they are crude.
- ✓ **Materials and Processes** Be sure to demonstrate a clear understanding of the way that your product is to be manufactured. Identify alternatives.
- ✓ **Mechanical drawings** Present either in sketch form, hand drawn mechanical drawings, or computer-aided design. Show basic orthographics, assembly, and important details of your final design. Show location of components and the weight distribution if important.
- ✓ **Finished model or rendering** It is important to include a high-quality final design concept. Show the product in use and show scale.
- ✓ **Images** Include one or two comprehensive images of your product. These images should show key features and human or size relationships. The product shown in its environment of use is very helpful. Color print outs of these images can be in your booklet. These images should be prepared according to the digital specifications in the entry guidelines. At the review meeting, the panel of judges will see a Power Point slide show that includes one, or two at the most, images of each entry. This slide presentation shows the judges the entire field so they can see the context for your work as they move to the winner selection step of the judging process.