



**The Biomedical Engineering Society of The University of Texas at  
Austin**

# **2018 Case Competition**



# Background

The Department of Nutrition for Health and Development (NHD) was created to address a spectrum of nutrition related issues worldwide, including (but not limited to) diet-related chronic illnesses. Topics that the NHD addresses include fighting against malnutrition, controlling and finding a solution to the obesity epidemic, nutrition during emergencies (in refugee and displaced populations), and more. In underdeveloped regions, populations lack food and resources to maintain a complete, nutritional lifestyle; conversely, in developed countries, the heavy marketing of packaged foods and junk foods creates a false understanding of healthy, balanced diets, and individuals turn away from a nutritionally dense diet for more processed options.



<http://www.who.int/nutrition/globalnutritionreport/en/>



# Objective

The World Health Organization's (WHO) Department of Nutrition for Health and Development (NHD) has chosen to consult with your team in an effort to innovate change using your technological and scientific expertise. *The new solution you propose should create a device, software application, biopharmaceutical solution, medical solution (e.g. surgical application), or policy change, etc. to diagnose, monitor, treat and/or maintain nutritional health.*

## Questions to Help You Brainstorm:

- How can you create solutions for a *specific* nutrition or lifestyle related disease, such as irritable bowel syndrome (IBS), obesity, anemia, hypovitaminosis, etc.?
- How can you make balanced nutrition more accessible to others using *technology*?
- How can you *diagnose* nutritional deficiencies?
- How can you help someone *maintain* nutritional balance during and/or following treatment of a lifestyle disease?
- How can you "hack" living tissues to promote a healthy body?

*(These are some suggestions to help you as you think about the prompt)*

## Things to consider

- Your solution may be a physical object or something intangible (e.g. a new policy).
- Research previous solutions or attempts to solve the problem.
- We strongly encourage you to identify a niche area for your solution.
- Make a novel and creative solution.
- Who else benefits from the impact of your solution?
- Is your solution feasible?
- Think of ethical dilemmas that could arise and how to circumvent them.
- Keep in mind the financial aspect of your solution.



## Summary

A successful presentation will include an innovative solution to the problem at hand, thorough research of the solution, a plan to implement the solution that includes a thorough understanding of the risks and rewards, potential pitfalls, opportunities for further development, relevant financial information such as business development, marketing, funding and expenses, etc., and the long-term impact of the proposed solution in an organized and aesthetically-pleasing presentation. 1

## Competition Day

The competition will be held on Saturday, November 17, 2018 at 9 am. Teams will be notified of their presentation times beforehand. Each team will have 15 minutes for their presentation: 10 minutes to present their solution and 5 minutes to answer questions from the judges. Dress code for presenters is Business Professional.

The 1st place team will be awarded \$600. The 2nd place team will be awarded \$400. The 3rd place team will be awarded \$200.

## Judging Criteria

### Idea:

- Novel
- Creative
- Practical

### Implementation:

- Net Positive Impact
- Minimal Ethical and Cultural Effects
- Economic and Technical Feasibility

### Proposal:

- Business Plan for Implementation
- Relevant Financial Information
- Long-term Effects

### Quality of Presentation:

- Neat and Organized
- Smooth Transitions
- Contains all necessary information

If you have any questions, please contact:

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