

### Team Profile Page (Level 2 Midterm deliverable)

At the Design Challenge Showcase event, every participant will receive a binder containing Showcase event and design team information. Two examples of team pages follow. TSGC will compile your photo, patch, and text into this format. All we need is the text (Word, Text application, or email).

**Deliverable:** Approximately 400 words of team information. Include design goal; team members' goals, hobbies, plans, etc.; background on your team's name and patch design; and any other trivia you wish to share with the Showcase audience.



UT AUSTIN  
LONGHORN SPACE WASH

## ALTERNATE CLOTHING WASHING OR SANITIZING SYSTEM FOR LONG DURATION SPACE MISSIONS



### TEAM MEMBERS:

Nirmala Phillip Senior,  
Mechanical Engineering

Jenna Foale Senior,  
Mechanical Engineering

Sarah Miller Senior,  
Mechanical Engineering

Avni Shah Senior,  
Mechanical Engineering

FACULTY ADVISOR: Dr. Preston S. Wilson, UT Austin

NASA MENTOR: Robert Trevino,  
NASA Johnson Space Center

PROJECT DURATION: Spring 2014-Fall 2014 First Semester of a Two-Semester Project

**DESIGN GOAL:** The objective of this project is to develop a feasible design concept for the purpose of sanitizing the clothing worn by astronauts on the International Space Station, in particular exercise clothing.

### TEAM TRIVIA:

- Team Patch:** Both the team name and patch reflect their school pride, as the longhorn symbol represents their University mascot. The stream of solvent across the earth represents the team's goal to design an alternative sanitization system for space use.
- Team Members:** **Nirmala Phillip (Team Lead)** Nirmala Phillip's previous work ranges from the design of large scale gas turbines to undergraduate research on microfluidics. She is an active member and volunteer for ASME, SWE, the Engineering Chamber Orchestra and their intramural teams. After graduation she plans to work as a design engineer for Schlumberger before returning to school to complete a Ph.D. in thermal fluid systems. **Jenna Foale** Jenna is involved with student radio and the Mechanical Engineering Honor Society Pi Tau Sigma, and Tau Beta Pi. Her interests in sustainability and renewable energy led her to intern at the National Renewable Energy Lab to work on the power performance characterization of wind turbines. Jenna hopes to someday work full time in the field of alternative energy solutions. **Sarah Miller** Sarah is a member of the Engineering Honors Program and has enjoyed participating in the Women in Engineering Program as a FIG Mentor and PAL. She worked on both the computational modeling of the fluid flow of drug delivery systems and designed an autonomous system which will be used by the Navy SEALs. After graduation, she will pursue a Ph.D. in biomechanics at UT. **Avni Shah** Avni has been involved in the UT Engineering EXPO committee for the past four years and has tutored calculus and physics. She was both an undergraduate research assistant at the Chemical Enhanced Oil Recovery lab at UT and an intern for GE Aviation in component testing. After graduation, she will be working in Houston for Schlumberger as a Design Engineer.





UT SAN ANTONIO  
MARS INVADERS

## MARS HABITAT & INITIAL SETTLEMENT VILLAGE



### TEAM MEMBERS:

Rohit Saxena - Junior,  
Electrical Engineering

Jamie Perez - Junior,  
Mechanical Engineering

Julio Ruiz - Junior,  
Mechanical Engineering

Adam Hartstein - Senior  
Mechanical Engineering

Reynaldo Gonzalez - Junior,  
Electrical Engineering

FACULTY ADVISOR: Manuel Diaz, UT San Antonio

NASA MENTOR: Hum Mandell, University of Texas at Austin Center for Space Research

PROJECT DURATION: Spring 2014-Fall 2014      First Semester of a Two-Semester Project

**DESIGN GOAL:** Our design team, the Mars Invaders, aim to find the logistics and design of a Mars habitat capable of sustaining life and fostering exploration.

### TEAM TRIVIA:

- Team Name:** The team was inspired by the arcade game "Mars Invaders." Initially the first designed we made was also in spirit of the mars invaders icon until we found better Patch: The team patch was designed by the team member Jamie Perez. She designed it to represent the spirit of solving issues with habitation on Mars. The patch was inspired by a picture of the solar system that our team leader remembered seeing in his elementary school classroom which first got him interested in space. All of our team members are important to us, so we included their names around the border along with our school name to show our school pride. Overall, the patch shows our desire to traverse the universe as we effort to expand the consciousness of mankind.
- Mars Invaders Uncovered:** The Team Leader is **Rohit Saxena**. His interests include robotics, artificial intelligence research, programming, and venture startups. He is an officer of Institute for Electrical and Electronics Engineers, member of Collegiate Entrepreneurship Organization and is currently interning at Intel. After he graduates he plans on applying his knowledge and effort directly towards the start of his own company or work in the space industry. **Adam Hartstein** is experienced in solidworks and is interested in the mechanical aspects of aerospace and aeronautical design. Once graduated, he desires to work with aeronautics or startup a company focused on aerospace. **Jamie Perez** is currently in training for a leadership position for Chi Alpha, a Christian organization. She has interests in the betterment of thirdworld Countries through water sanitation and after graduation, plans on working for an organization that helps with the cause. **Reynaldo Gonzalez's** interests are in the fields of electromagnetism and renewable energy. After he graduates he plans on earning his masters degree and either work for a company that researches in his interests.

