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| Activity 01-1 | Course overview and introduction |
| Textbook Reference: |  |
| Purpose / Goal: | Course overview, demonstration/discussion of leadership and design process, introduction to the Mini Project, pair grouping for Mini Project, complete online safety quiz |
| Materials / Resources Required: | 4 square, helium sticks, syllabus, IED Mini-Project Competition document, playing cards for pair formation (optional), computer to display mini-project videos (optional) |
| Time Allocated: | 1 hour 50 minutes |

# Introduce Instructors and Share Contact Information

**Time Limit - 5 minutes**

Instructors will review office location / hours and contact information with the students and start to draw on the expertise of each of the instructors with Engineering technical skills and Leadership/Team skills.

# Review course objectives and syllabus

**Time Limit - 20 minutes**

The course will focus broadly on the mini project in the first 4 weeks and then the Team project the rest of the semester.

Since one of the objectives focuses on teamwork we thought we would do an activity that demonstrates some of the important factors…

# Helium Stick Activity

**Time Limit - 20 minutes**

Instructions: Divide the class in half and have each group form 2 lines shoulder to shoulder. The lines should be facing each other and be about 1 ½’ to 2 feet away. Have each person extend their index finger with the palm side down.

## The Explanation

Our students often think that either working on a team doesn’t require any “skills”, or that they already have them. The helium stick activity demontrates that **cognitive understanding does not equal skill.** This exercise illustrates that teamwork is challenging -- even when the task itself may seem simple.

There are two sets of skills that are necessary to function as a high performance team: technical skills (task) and team skills (relational). This course will challenge both of these skill sets and both will be needed for you to be more productive.

# What is the design process?

**Time Limit - 15 minutes**

Discuss the key important concepts of the design process.

# Transition to Mini Project and Team Formation

Mini projects are to be executed by two person teams. Unfortunately it is possible to either start with an odd number of students or to end up with this due to adds / drops over the first few weeks. This may necessitate the creation of a few 3 person teams.

## Introduction to the Mini Project

**Time Limit – 15 minutes**

Instructor will describe the Mini Project, and will (optionally) show the mini project videos from LMS. Alternatively, the students may be instructed to view the mini-project videos on their laptops. This will help the students begin to self-select the project they are interested in before forming teams.

## Team Formation

**Time Limit – 20 minutes**

## Guidelines

1. Form the teams during the first class.
2. If you start the class with an odd number of students, add the extra student to a team.
3. If any students join the class afterwards, add those students to an existing pair of students to make trios. Thus three new students cause the creation of three trios.
4. Do NOT form new students into new teams. By merging them into the existing ones they will gain the necessary continuity.
5. Once a two person team has been formed, do not dissolve it unless one of the two students drops the course. Add the remaining student to an existing pair to make a trio.

## Team Formation Activity

At the option of the instructor, students may wish to separate themselves into 3 large groups based on the mini-project topic they find most interesting. The following “pair up” methods are suggested to form the actual mini-project pairs, from sub-groups or class-wide.

Choose one of the following quick “pairing up” methods

* Silent birthday line-up
* Count off by 2’s
* Line up by height / clothing colors
* Playing cards: set up 2 full sets of 2 suits plus jokers (this gets you 14 pairs)

Once they are in pairs, two fast startup activities will help the teams get started. First, each learns several simple facts about the other person:

* Name
* Major
* Graduation Year
* Home Town
* One favorite thing:
  + Color
  + Food
  + Place
  + Pet
  + etc.

Next, a "four square" style team building activity will help each learn more about each other. Pass out 4 square questions and have each student individually fill it out and then go through each question with their partner. This will help the forming stage and begin to put some thought into the design. Have students exchange contact information (e-mail, phone #) and decide when they are touching base next.

# Project Selection

Teams should select which mini project they will take on. This can be accomplished by passing around a sign-up sheet. If possible, project materials may be made available at the first lecture so students should plan to bring money to that lecture.

# Safety Guidelines and On-Line Quiz

**Time Limit - 10 minutes**

Students will complete the safety quiz online, in class if time permits otherwise outside of class time.

(Printed proof of completion must be provided to the instructor before the students are allowed to use the shop.)

# Lecture Preparation

Be sure to bring your iClicker to all lectures with fresh batteries and a spare set – just in case! These will be used to take attendance and to participate in the interactive surveys.