

2015 Summer Engineering Technology Program
Building for Tomorrow: Introduction to Civil Engineering
Instructor: Frederick Bloetscher, Ph.D.
Offered Week 3: (June 22-26)

SCHEDULE	MORNING SESSION (9 AM - 12:30 PM)	AFTERNOON SESSION (1 – 4 PM)
MONDAY	<ul style="list-style-type: none">• Overview of Civil Engineering Major<ul style="list-style-type: none">• Includes tour of labs.• Concrete Cylinders Activity - See who can make the strongest concrete cylinder out of cement and rocks. We will give you the materials to mix – you will get dirty.	Bridge/Structure Design <i>Activity-Length vs. Weight</i> This activity will test how students will look at a problem of building a strong bridge, out of spaghetti and glue.
TUESDAY	Environmental Engineering/Water Quality <i>"Clean that Dirty Water" Activity</i> Figure out what can be used to filter water. Feel free to bring some disposable stuff with you. You need to clean 2 g of water in 10 minutes or less. Winner is clearest water and least time. Test in lab with turbidity meters. Individual project. We will use dirty water from a local stream.	Building/Structure Design <i>Activity-Volume vs. Weight</i> This activity will test how students will look at a problem of building a structure out of popsicle sticks and glue. The largest volume with highest strength will be the winner.
WEDNESDAY	Dam Construction/Water Resources <i>"Five Gallons in Five Minutes" Activity</i> How to build a dam that will leak 5 gallons in 5 minutes through a hole in the dam. Closest to the time wins. You might get wet!	Coastal Engineering /Construction Wind tunnel or hurricane house activity – how to keep stuff on the roof.
THURSDAY	Surveying Methods This activity will test how students will look at a problem figuring out how high the stadium on the FAU campus is. We will use survey instruments and see who can get the closest with their calculations. And you cannot actually measure the height with a ruler. So how do we do it?	Importance of Statistical Data Prepare to be crushed... or at least your projects. We will spend the afternoon breaking structures in the structures lab.
FRIDAY	<p>(8:30 a.m. - 12:30 p.m. today)</p> <ul style="list-style-type: none">• Review of Week's Activities/Presentations Create a short Powerpoint presentation about what you learned from the projects. We will see who has the most insight about the testing.• Pizza Party & Certificates We will give certificates to everyone who participated and to the contest winners!	No afternoon session