

Who Organizes the Camp?

The camp is organized jointly by:

- NC State Summer Program
- Materials Science and Engineering Department
- Carolinas Central Chapter of ASM.

Who Should Apply?

Materials camp is ideally suited for rising high school juniors and seniors interested in Engineering as a career.



Students make silly putty to demonstrate materials principles.

How Do I Apply?

For further information and application, check out the Materials Camp website at:

<http://www.ncsu.edu/aif/asm/matcamp>

NCSU Summer Camps at:

<http://www.engr.ncsu.edu/summerprograms/workshops.html>

Financial support provided by:



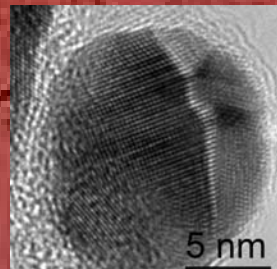
<http://www.ncsu.edu/aif/asm/matcamp>



Materials Camp June 22-27, 2008



NC STATE UNIVERSITY



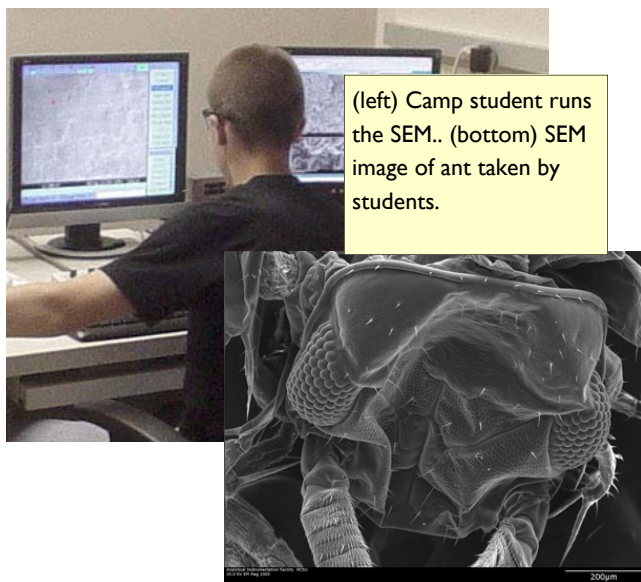
What Is Materials Camp?

Materials camp is a week long residential camp held each summer at NC State encouraging students to pursue careers in Chemistry and Physics. More specifically, it introduces students to the world of Materials Engineering.

What Will I be Doing?

You will be doing everything. The camp is designed around the idea of Active Learning where the students learn by actually running the equipment to perform experiments.

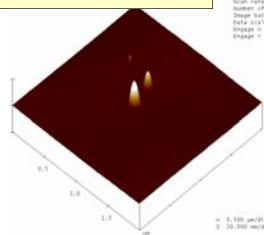
Students will run Scanning Electron Microscopes (SEM), Atomic Force Microscopes (AFM), Focused Ion Beam (FIB), etc.



(left) Camp student runs the SEM.. (bottom) SEM image of ant taken by students.

Cover: (background) Optical Microscope image of Waspalloy. (top) Image of Tuffie the Wolf etched into Si with a FIB (red letters digitally enhanced). (middle) AFM image of nanofibers. (bottom) TEM image of gold nanoparticle prepared by camp students.

(right) Students run the AFM to measure gold nano-particles that they created.



(left) AFM analysis of the particles.



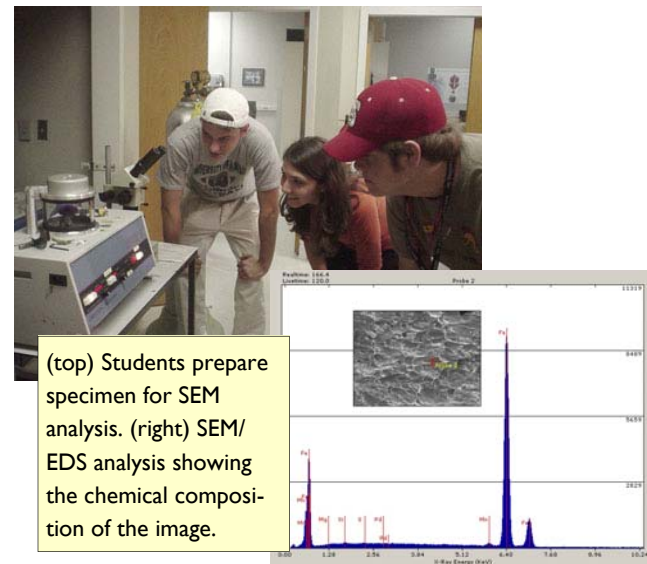
Students are assigned labs or problems that they will have to solve using all of the analytical techniques available to them.

Other Activities?

Students will also get the opportunity to suit-up and tour the NCSU Clean Room facility and tour local industry.



(top) Students get to clown around in the clean room. (right) Materials Mentors make nano-icecream.



(top) Students prepare specimen for SEM analysis. (right) SEM/EDS analysis showing the chemical composition of the image.



Materials mentors show students how to perform tests.



What does a 20lb ball of silly putty look like after an 8 story drop?