

Welcome to the final stage of Engineering Technology in the middle school. Let me begin by explaining how this class will differ from the previous two years of Tech. First, we will not be utilizing the woodworking lab area for any work. Instead, you will be using computers and modular unit equipment for all in-class assignments. Second, students will be working with one other person as a team for the entire term. Third, each team of students will be working on a different area of study at a self paced level. (There will be a common due date for all assignments, but each group will be accomplishing different goals.) Last, there will be one research project, two homework assignments, one mid term exam and one final exam. All students will start the term with the same individual grade, an A+ , and it's up to the students to keep as many points as they can by completing all activities and assignments accurately and on time.

In order to assure that each student gets a similar experience , the 9 week term, as we know it, will be split in half. (We do not have enough equipment for all students to be working on the same project all at once.) About four weeks will be spent experimenting with the Modular Unit Curriculum. The other four weeks will be spent using computers as a tool for various Computer Aided Design (CAD) assignments.

## MODULAR UNIT CURRICULUM

For one half of the term each student, with a partner, will work entirely on Modular Unit activities and experiments. All experiments, activities, and work sheets must be done as a team. The grades you receive for this part of the course will be given AS A TEAM. (If you get an A, you both get an A, if you get a D, well you get the idea) It is the students responsibility to keep track of their time and to use it wisely. This is also a lesson in classroom time management. By working as a team, it should make the experiments and activities easier to complete.

The 6 modular units we will study are as follows:

**Laser Communications  
Electronics**

**Solar Power  
Fiber Optics Technology**

**Pneumatics Technology  
Wind Power**

## COMPUTER AIDED DESIGN (CAD)

The other half of the term will be spent doing computer aided design challenges. There are three required assignments that you will need to complete. The difference with the computer assignments is, students will NOT be doing the activities as a team. Instead, students will complete projects individually. Students will work on their own projects on their own computer each class. Each assignment has specific criteria you must meet, but will always be graded individually based on individual ability.

The three computer assignments are as follows:

**Digital Photography**

**Virtual Bridge Design**

**Graphic Arts Design**

At the beginning of each new unit, each student will receive an assignment sheet that will outline all expectations and a grading rubric. Students can view and print a copy of any of my curriculum hand-outs, along with many other resources from my classroom webpage located at the address below. Check my web page often for updated information and resources that will help you to complete the assignments. Engineering Technology Webpage:

[http://www2.newton.k12.ma.us/~mike whitman/](http://www2.newton.k12.ma.us/~mike_whitman/)

My web site also has an extensive list of Extra Credit activities. These activities vary from grade boosters (a single assignment that will increase your grade by 10, 20, or 30 points) to grade replacements (a single assignment, that when completed correctly, will replace the lowest grade for the term). These Extra Credit activities can be completed throughout the current term only. I also have printed copies of all the extra credit activities if you do not have access to the Internet.

## CURRICULUM AND GRADING

The following is a list of all the assignments that are to be completed by the end of the current term. Specific due dates will be given at the beginning of each assignment and can be reviewed on my web site in the "Homework" section.

<b>Curriculum Assignment</b>	<b>% of Total Grade</b>
6 Modular Unit Experiment Worksheets	60
Computer Aided Design / Digital Photography	10
Virtual Bridge Design and Testing	10
Computer Aided Design Vocabulary Work Sheet	20
Engineering Careers Vocabulary Work Sheet	10
Final Examination	10
Classroom behavior and participation grade *	10 <i>maximum</i>

*\* Notice that the classroom behavior and participation grade brings the total to over 100%. As long as the student behaves in class and cleans up after him/herself, there will be no deduction in the final grade for the term. If there is a behavior or participation issue, this issue could lower the final grade.*

It is my expectation that all assignments be handed in accurately and on time. If a student is absent for any reason, it their responsibility to see me to make up any work. I may extend a due date in special cases, but I usually expect the students to use "out-of-class" time to complete any missed work. 10 points will be deducted for each class that an assignment is handed in late. After 10 days late the assignment may not receive any partial credit and must be replaced by an extra credit activity. Extra credit activities may be found on my web site in the "Extra Credit" section or, if a student does not have access to the internet, they may see me personally for printed copies of each.

### MAKE-UP TIMES

I am available any morning from 7:00 to 8:15. I am also available after school from 2:45 - 4:00 except on Tuesdays and on some Fridays. I also will allow student to come during 4th period "Enrichment Block" as long as it the supervising teacher approves.

**SUGGESTED MATERIALS FOR COURSE:** One CD-RW or Flash Drive or Jump Drive for transporting files.

A pencil will be needed in each class, please bring one to class every day. Each student will be give a 3-ring binder to be used as a Technology Portfolio during the term. These notebooks are the property of Bigelow Middle School Technology Engineering Department and should not be damaged in any way. If the binder is damaged by the student, a \$8.00 fee will be assessed to the student and grades will be withheld until payment has been made.

From time to time I take digital pictures of students engaged in learning, projects, races, etc. If there is any reason you feel you would prefer to have your child's photo NOT taken, please indicate your wishes below.

My Web Address:

[http://www2.newton.k12.ma.us/~mike\\_whitman/](http://www2.newton.k12.ma.us/~mike_whitman/)

*If you ever have any questions or concerns, please do not hesitate to contact me.*

*Sincerely, Michael Whitman*

**Phone:** (617) 559-6800  
ext. 457119

**email:** mike\_whitman@newton.k12.ma.us

*~ Please sign below and return ~*

**Student Signature:** \_\_\_\_\_

**Parent Signature:** \_\_\_\_\_

