TECHNICAL DRAWING

Course Objectives, Topics, Grading • 2013/2014
Technology Education • High School North • Mr. Milnes • milnespe@middletownk12.org

TECHNICAL DRAWING

Technical Drawing (and Advanced Technical Drawing) introduces students to the profession of drafting. Students will gain skills and knowledge in freehand sketching, lettering, orthographic projection, dimensioning and pictorial drawing. Students then apply their drafting skills in creating drawings in the engineering fields of Architectural (buildings & landscape), Aerospace (aircraft manufacturing), Electrical (electronics and electricity), Machine (manufacturing), Mechanical (heating, ventilation, AC & sewer), Naval Architecture (ship construction) and Structural (steel reinforcements and bridges). CAD drawing is performed on school computers using SketchUp, AutoCad and other CAD software. Students also stay up-to-date with current technical drawing technology trends (ie: renewable energy) by using web-based videos and applications from the industry. Experts from the industry will also be invited to visit the classroom.

COURSE OBJECTIVES

1. Acquire knowledge of basic principles of technical drawing, sketching, use of drafting equipment and mastery of Computer Aided Drafting, primarily using a program that is becoming the high school CAD standard — Google SketchUp.
2. Learn about building construction practices/standards while applying these concepts to student CAD projects.
3. Become proficient with time management, problem solving, organization methods, critical thinking and effective visual/oral communication regarding CAD operations.
4. Understand careers that require technical drawings, and the steps needed to obtain a job in that field.
5. Learn the history of technical drawing and graphic communication.

GRADING

Technical Drawing is “project driven” with the bulk of the grades coming from assigned projects. Grades are entered into Power School (viewable online for you) shortly after each project is completed. Students must follow classroom rules and practices (opposite side of this paper). Technical Drawing class takes place in a computer lab. There are safety issues (and expensive equipment) in the class and inappropriate / disruptive behavior will not be tolerated. Students/parents will be held accountable for any damages in each class. It is to the student’s advantage to participate in completing projects:

1. Projects — 75%  
2. Quizzes — 15%  
3. Class Participation/Cleanup — 10%

COURSE TOPICS

Course consists of the following activities/topics after classroom rules, procedures and expectations are learned.
List order is flexible:

1. History  
2. Drafting Tools, Equipment, Materials  
3. Principles of Design  
4. Freehand & Technical Drawing  
5. Blueprints, Measuring & Basic Drafting Math  
6. Shapes & Angles, Pictorial Drawings, CAD  
7. Careers and Applications  
8. Green Alternatives & Renewable Energy  
9. Plotter Printing  
10. Home Design

Above subject areas will also be infused with technology and industry standards with the assistance of “How To” DVDs, online videos and visits from industry professionals. Course is not limited to listed topics as related technical drawing topics emerge and become available. If time allows, a field trip may be planned. *
Technology Rules • 2013/2014

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BE RESPECTFUL!

1. NEVER (EVER) enter classroom until Mr. Milnes (or substitute) is present.
2. Be on time for class — lates add up (3 lates = 1 detention).
3. Seating assignments will be alphabetically in the beginning.
4. Once inside the classroom, sit in your seat immediately for attendance.
5. Be safety conscious at all times.
6. No running or horse play. This is a safety issue and will trigger a referral.
7. Only visit web sites that teacher instruct you to.
8. Smart phones and cell phones are not permitted, unless directed to do so.
9. If office calls into class via PA system, the class should quite down quickly.
10. DO NOT SIT ON TABLE TOPS, WORK BENCHES, OR COUNTERS.
11. No flavored DRINKS (water only), CANDY, or GUM allowed in class.

** KEEP WATER BOTTLES ON FLOOR or IN YOUR BAG **

12. Do not deface school property.
13. Limit use of bathroom pass — for bathroom use only.
14. Keep room/desk clean. A desk/chair left out of order affects your grade!
15. Stay in seats until bell rings.
16. DO NOT SWEAR OR USE CURSE WORDS.
17. Use your headphones when drafting, but do not stream music from Internet.
18. Upper class students are expected to act as mentors.
19. If you learn something, help the person next you (if needed) on how you “GOT” it.

Student Name _______________________________ Guardian Signature ____________________________

** TECH DRAWING SUPPLIES NEEDED BY STUDENT — 4 or 8 gig flash drive, inexpensive ear buds/headphones (dollar store), basic sketch book (dollar store).