MALVERN COLLEGIATE

TECHNOLOGICAL DESIGN TDJ2O1

This course provides students with opportunities to apply a design process to meet a variety of technological challenges. Students will research projects, create designs, build models and/or prototypes, and assess products and/or processes using appropriate tools, techniques, and strategies. Student projects may include designs for homes, vehicles, bridges, robotic arms, clothing, or other products. Students will develop an awareness of environmental and societal issues related to technological design, and will learn about secondary and postsecondary education and training leading to careers in the field.

PRERQUESITE: none/open

OVERALL EXPECTATIONS

- identify and describe the purpose, scope, and steps of a design process
- identify and describe tools, strategies, and skills needed for project research, planning, and organization
- demonstrate an understanding of how design ideas are represented graphically
- explain the purpose of building models and prototypes, and identify tools, materials, and methods for building and testing them
- demonstrate an understanding of communications methods used in the design process
- research, plan, and organize projects, using a design process and appropriate methods and tools
- apply appropriate methods for generating and graphically representing design ideas and solutions
- create and test models using a variety of techniques, tools, and materials
- use suitable communication methods throughout the design process
- demonstrate an understanding of environmentally responsible practices, and apply them throughout the technological design process
- describe how society influences technological innovation and how technology affects society
- apply appropriate health, safety, and environmental practices throughout the design process
- identify careers related to technological design, and the education and training required for them

ACHIEVEMENT CATEGORIES AND WEIGHTING

FORMATIVE 70% of final mark CULMINATING PROJECT 30% of final mark

- TESTS 5%
- ASSIGNMENTS 15%
- PROJECTS 50%

LEARNING SKILLS

Independent Work, Team Work, Organization, Work Habits, and Initiative

Evaluation key: Excellent, Good, Satisfactory and Needs Improvement

AREAS OF FOCUS

- tool and equipment safety
- 2D and 3D design – drafting and CAD
- product design and construction
- product testing and evaluation

ASSIGNMENTS

- research, sketches, concept drawings, drafts and CAD designs

PROJECTS

- tower design, labyrinth design, clock design

COURSE EXPECTATIONS

1. Come to class prepared. Bring pencils, pens and other materials to every class

2. Attendance is important for success in this course.

3. Use class time efficiently and effectively.

4. Due dates are to be adhered to. It is your responsibility to catch up on missed work. Deadlines may be extended for legitimate reasons.

5. Projects and assignments are to be completed at school unless authorized by the teacher.

6. Please identify all work to discourage theft and loss. Store your work in designated areas.

SAFETY

- safety glasses at all times
- closed shoes at all times
- no horseplay or vandalism
- ask the teacher for instruction on equipment if unsure-when in doubt ask the teacher
- pay strict attention to the work during operation of machinery
- it is the responsibility of students to clean all areas after use
- report an accident or unsafe condition immediately
- no food or drink allowed in the classroom