MALVERN COLLEGIATE

TECHNOLOGICAL DESIGN TDJ3M1

This course examines how technological design is influenced by human, environmental, financial, and material requirements and resources. Students will research, design, build, and assess solutions that meet specific human needs, using working drawings and other communication methods to present their design ideas. They will develop an awareness of environmental, societal, and cultural issues related to technological design, and will explore career opportunities in the field, as well as the college and/or university program requirements for them.

PRERQUESITE: TIJ1O1 or TDJ2O1 recommended

OVERALL EXPECTATIONS:

- demonstrate an understanding of factors and relationships that affect technological design and the design process
- describe appropriate strategies, techniques, and tools for researching, organizing, planning, and managing design projects and related activities, with an emphasis on financial, human, and material resources
- demonstrate an understanding of drafting standards, conventions, and guidelines for various types of drawings used to represent designs
- demonstrate an understanding of a variety of tools, materials, equipment, and processes used to build, test, and evaluate models and prototypes
- use appropriate terminology and communication methods to document, report, and present progress and results
- use appropriate strategies and tools to research and manage design projects and related activities
- apply appropriate methods for generating and graphically representing design ideas and solutions
- create and test models and/or prototypes, using a variety of techniques, tools, and materials
- use a variety of formats and tools to create and present reports summarizing the design process and to reflect on decisions made during the process
- demonstrate an understanding of environmentally responsible design practices, and apply them in the technological design process and related activities
- describe the relationship between society and technological development
- describe and apply health, safety, and environmental practices related to technological design
- identify career opportunities in fields related to technological design, and describe the training and education required for these careers

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

- main focus on residential architecture, design and construction

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