



Galt Collegiate

200 Water Street North, Cambridge, Ontario, N1R 6V2 (519) 623-3600 <http://gci.wrdsb.ca>

Course Outline

Technological Design & Engineering, Grade 12, University/College Preparation, TDJ4MI

Teacher: Mr. Tremblay	Teacher Contact Information: marc_tremblay@wrdsb.on.ca	Course/Teacher Website: N/A
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Course Description

This course introduces students to the fundamentals of design advocacy and marketing, while building on their design skills and their knowledge of professional design practices. Students will apply a systematic design process to research, design, build, and assess solutions that meet specific human needs, using illustrations, presentation drawings, and other communication methods to present their designs. Students will enhance their problem-solving and communication skills, and will explore career opportunities and the postsecondary education and training requirements for them.

Prerequisite: Technological Design, Grade 11, University/College Preparation

Required Learning: Big Ideas

To earn this credit, students must demonstrate their learning of the following big ideas:

- Introductory Skills
- Problem Solving Skills
- Sketching of Ideas and Concepts
- Production of Technical Drawings
 - 2D Computer Aided Design Skills
 - 3D Computer Modeling Skills
- Model Building



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Evidence of Learning

Students will provide evidence of their knowledge by completing the following items:

Assembly and Order of Operation Assignments	70
Measurement with Imperial and Metric Conversions	
Scale Reading	
Orthographic and Isometric Projections	
Problem Solving Model Assignment(s)	
Advanced AutoCAD Applications and Functions	
Solid Edge and/or Envisioneer 3D Computer Modeling	
Engineering Design Practical Project(s)	
Product Design and Marketing Assignment(s)	
Architectural Design Practical Project(s)	
Portfolio	
Introductory Test	30
Safety Test	
Summative Project	

Course Evaluation

Student work will be evaluated using a balance of the Ministry's four achievement chart categories: knowledge & understanding, thinking & inquiry, application, and communication.

Throughout the course, teachers will gather evidence of student learning through observations, conversations, and student-produced work.

Seventy percent (70%) of the final mark will come from term work, and thirty percent (30%) will come from final evaluations. Report card grades will reflect the student's most consistent level of achievement, with consideration given to more recent evidence.

Guidelines for Assessment, Evaluation and Reporting

1. Learning Skills

The Learning Skills and Work Habits section of the provincial report card is an integral part of a student's learning. Students will be assessed in the following areas:

- Responsibility
- Initiative
- Independent Work
- Collaboration
- Organization
- Self-Regulation

The following scoring system is used for Learning Skills:
E=Excellent; G=Good; S=Satisfactory; N=Needs Improvement



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2. Missing Work

Students are expected to submit all evidence of learning by the assigned date.

- (a) The Learning Skills section of the provincial report card will be used to reflect incidents of late and missing work.
- (b) At the time of entering a report card grade, students with missing evidence of learning may receive an "I" ("I" = insufficient evidence) on their report card and will not receive a credit (Grades 9 and 10), or may be assigned a failing mark and will not be granted a credit for the course (Grades 11 and 12).

3. Cheating and Plagiarism

Students are expected to submit their own original, best work to demonstrate their learning.

- (a) The Learning Skills section of the provincial report card will be used to reflect incidents of cheating and plagiarism.
- (b) Students caught cheating on tests or assignments will receive an "I" ("I" = insufficient evidence), and will be required to demonstrate their learning through an alternative evaluation.
- (c) Students who plagiarize may be required to re-do all or part of the assignment (or evaluation) or complete an alternative assignment (or evaluation). The student's work may be treated as Missing Work (see above). As well, potential consequences for plagiarizing include disciplinary action (e.g., suspension) and loss of access to academic awards and scholarship opportunities.

Other Course Information

Classroom Conduct

Classes will begin and end with all students in their seats. Do not get projects or go to work until instructed to do so.

Classes will be dismissed at period end by the teacher, with students at their seats, not crowded around or lined up at the door.

Students will not leave the room, during class, without the teacher's permission.

Classroom Expectations

Punctuality and Attendance: Be in class on time. Coats or jackets are to be left in lockers or taken off.

Co-operation: Helping others, proper classroom behaviour and resource sharing is expected.

Classroom Resources: There will be no tolerance of misuse, wasting or damaging of the classroom resources.

Clean-Up: All students will be expected to help in cleaning up the facility at the end of the period, regardless of whether they used resources or not.

Equipment: No equipment is to be used until it has been demonstrated by the teacher and, then, only when the teacher is in the room.

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Food in Class: Students are permitted drinks and small snacks at the work tables, provided they dispose of all related garbage (cans, wrappers, etc.). There is to be **ABOSOLUTL Y NO FOOD OR DRINK AT THE COMPUTER TABLES!!!** This privilege will be revoked if these rules are broken.

Initiative: Be a self-starter with good work habits that uses class time wisely.

Do not keep others from their work!

Horseplay: Horseplay in the lab or shop endangers everyone and can result in serious injury or damage to the equipment. Horseplay will result in immediate removal from the class.

No throwing anything at any time!

Profanity: No profane language is to be used.

Computer Use

Computers are only to be used as required by the course content. Playing games, surfing the net, or any other unauthorized use of the computers will result in removal from the computers. If in doubt, ask the teacher's permission.

Social Behaviour

Personal, racial or sexual comments toward others or any threats or violence will not be tolerated in class.

Socially Acceptable Material

Material developed by students for this course will reflect strict, socially acceptable standards. There will be **NO TOLERANCE** for material containing references to drugs, alcohol, sex, racism, violence or cultural/religious defamation.

Design Relevance

Designs, characters, logos, themes, etc. are to reflect a **genuine effort** toward relevance and appropriateness. Work directed at undermining the intent of the curriculum, in the teacher's opinion, will not be accepted or tolerated and must be changed/corrected.

Head Phones & Cell Phones

The use of headphones and cell phones while using tools or during other teacher described times is strictly prohibited for the safety of the students. The use of a **Personal Digital Assistant (PDA)** is acceptable in the classroom if it is used in a responsible way and if the student can demonstrate that it is being used for educational purposes.

Fire Precautions

Students will become familiar with the fire escape routes.



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Zero Late Incentive Program:

As an educator, my hope is that students will learn how to meet deadlines and prioritize their work while absorbing and applying the course content in a meaningful way.

It is commonly understood that there are legitimate circumstances and factors that may result in a late submission. To help students in cases where they cannot hand in an assignment on time, this course will run on a 3 strike system. Circumstances that cause a late submission that will not be considered as a day late may include things such as school related absences for sports or legitimate non-school related absences such as an illness. This *Zero Late Incentive Program* is exclusive to this course. This is how it works:

1. If the assignment is handed in on the due date there is no penalty.
2. If the student is late on their first assignment, they automatically make use of their first strike...
 - a. This means they have 5 more school days to complete that assignment without penalty. We will call this an extension. They are now left with 2 more strikes.
 - b. If they go beyond the 5 day extension period a deduction of 1 school day off their next extension will be applied for every extra day they are late.
 - c. There are a total of 5 extension days per student per semester. If a student, for instance, hands in an assignment 2 days after the first extension, they are only left with 3 extension days on the next strike. If a student exhausts all of their extension days on the first strike, for example, it will eliminate all following strikes and extensions and eliminate the opportunity for a semester end bonus.
 - d. The expectation is that all assignments be submitted in a timely manner.
3. Students who do not use their allotted strikes will be able to use them as bonus marks at the end of the semester at the discretion of the teacher up to a maximum of 3% on the final report card grade! This is equal to one percentage for every strike not used.

Students are encouraged to save these strikes for when they are truly needed, for example near the end of the semester when multiple assignments may be due. These strikes are a gift or an investment, depending on how a student uses them.



Technological Studies Safety Contract

TDJ4MI

Congratulations on your choice of a Technology Program at GCI. Technological skills and abilities are prized highly in today's work world.

In order to ensure the best experience and safest environment, students are asked to review and sign the following safety contract, agreeing to a high standard of safety for all.

1. Power equipment must NEVER be operated unless the instructor is present in the shop/classroom.
2. Do not run in the shop.
3. "Horseplay" of any kind will not be tolerated. NEVER throw anything in the shop.
4. Keep eyes and full attention on all moving and cutting parts of the equipment being used.
5. Use common sense: always keep hands and fingers clear of cutting tool's edge.
6. Protective equipment, such as safety glasses, must ALWAYS be worn when using equipment.
7. Long hair and loose clothing must be restrained. Jewellery must be removed.
8. Never use any machine until you have been fully instructed by the instructor to do so.
9. Report any injury, no matter how slight, to the instructor.
10. Keep all parts of the shop clean (machines, floors, tables, etc.)
11. Report any damage or malfunctioning machine immediately to the instructor.
12. Power equipment must never be left running unattended.
13. All students must be instructed on all power equipment and pass a written safety test before being allowed any tools or equipment.
14. Equipment that may be used in the shop includes:
 - Drill Press
 - Band Saw
 - Various Hand Tools
 - Edge Sander
 - Compound Mitre Saw
 - Pneumatic Tools



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SIGNATURES:

Please sign below indicating you have read and understood this course outline, including the requirements for successful completion of this course, and return this sheet to your teacher:

Print Student Name

Student Signature

Date

Parent/Guardian

Date

SAFETY AGREEMENT:

We understand that equipment is to be used in the technical program and agree to abide by all safety rules in the various facilities. Failure to abide by these programs will result in disciplinary action or possible removal from the program.

Note: *Students will NOT be able to operate facility equipment until this contract is signed and returned to the instructor.*

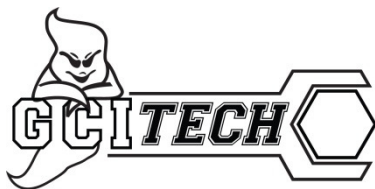
Print Student Name

Student Signature

Date

Parent/Guardian

Date



**Waterloo Region
District School Board**

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