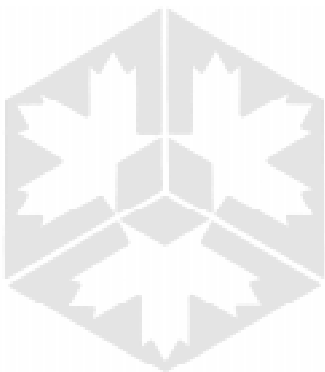


MGCI Technology Department

Course Descriptions



	Codes
G9 Integrated Technology	TTI 101
G10 <i>Communication Technology</i> Introduction to MultiMedia Level #1	TGJ 201
G10 Transportation Technology	TTJ 201
G11 Art & Design Level #1 • Advertising	TDJ 3MT / 3ET (D)
G11 Automotive Technology Level #1	TTJ 3CT / 3ET
G11 Computer-Aided Drafting	TDJ 3MD / 3ED
G11 Cisco	TDJ 3MN / 3EN
G11 Food Preparation	TFH 3E1
G11 Hospitality	TFT 3C1
G11 MultiMedia Level #2 • 3D Animation/AudioVideo/PhotoShop	TGJ 3MW / 3EW (U)
G12 Art & Design Level #2 • Advertising	TDJ 4MT / 4ET (M)
G12 Automotive Technology	TTJ 4CT / 4ET
G12 Cisco	TDJ 4MN / 4EN
G12 Food Preparation	TFH 4E1
G12 Graphic Arts • Publishing	TGJ 4MG / 4EG (D)
G12 Hospitality	TFT 4C1
G12 MultiMedia Level #3 • 3D Animation or Web Publishing	TGJ 4MW / 4EW (U)

September 2004

This booklet has been created to help students identify the different courses and codes in technology. The course descriptions give students an idea and an understanding of what is being covered in each of the different technology courses.

Additional information is available now on the MGCI Technology web site and more information will be added throughout the school year.

Technology web site URL is:

<http://schools.tdsb.on.ca/marcgarneau/Departments/index_department.html>

Integrated Technology

TTI 101 (Grade 9)

G9

Integrated Technology

What is Integrated Technology?

Integrated Technology introduces the student to both the designing and the building of a product. In this process, the student will be developing a product to perform a particular task. Students will have the opportunity to explore different areas of design and gain an understanding of the skills required to produce the product. Skill areas range from basic hand tools to the latest AutoCAD programmes for computers.

Do I need to know something about hand tools or computers?

This course has been created to introduce the students to the full range of hand tools and computer software used in CAD drawings.

Why would I want to take this course?

This course exposes the student to many different technical and academic directions for possible future employment. The planning and building of a product will give the student a feel for what is involved in the process and if it is a direction they would like to investigate in greater detail.

Why take this course now?

It is important, in grade 9, to start exploring as many different job possibilities as possible. This course allows the student hands-on experience in many different areas. Students can also develop an understanding of the difference between the technical and the academic needs of industry today.

Academic Students do not need to learn hand tools?

YES, University will not require academic students to use trade tools. However, students with a good understanding of trade tools and procedures have an advantage over other designers who do not have the experience of what the tradesperson will have to go through to produce or service the product.

Fun and Competition:

If they wish, students can enter two different competitions while in the course. These competitions are fun and exciting. The winners in the competitions will receive an award and title as either the Weight Lifting or Cyborg Champs of the school. There are two categories for the robotic weight lifting: Vertical Lift and Swing Lift categories.

Are you interested in the future?

Then come and discover your potential in integrated design, and how it can affect your future!

TTI 101

Introduction to Multimedia Level #1

TGJ 201 (Grade 10)

Communication Technology

What is it about?

Introduction to Multimedia introduces the student to the latest tools and equipment in the Communication industry. Students will explore their potential skills and creative abilities in five main areas.

What will be studied?

1. **Information Display & Environments:** Students will plan and produce environments for information displays on the classroom bulletin boards as well as our digital bulletin board and the tech display windows. Students will work with presentation software like Powerpoint and Photoshop. In groups, students will take on the responsibility of managing and planning the digital bulletin board.

2. **Graphic Design and Production:** Using CorelDraw, students will explore the power of this draw programme used in the graphic arts industry. Students will re-create a well-known off-the-shelf package or label and promotional materials for the digital bulletin board. Students will study systems, terminology, basic window parts and purposes, purposes and functions for different peripherals, basic components of the computer and future directions, etc.

3. **Short Audio-Video Production:** Using video cameras, the students will work through a tutorial and at the end they will create a short production. Students will work in groups and will be required to do acting, directing, editing or filming.

4. **Image Production and Processes:** Adobe PhotoShop is used by the students to create and manipulate digital images. Scanners and digital cameras are also explored as input devices for images to be used in PhotoShop. Students will create modified digital images for promotional materials to be used on the digital bulletin board. Students will use Adobe PageMaker to create layouts.

5. **Short Animation:** Students will use the Adobe PhotoShop animation feature to create a short animation. Students will create a 2D animation to be used on the MGCI digital bulletin board. The animation will be burned onto a CD Rom.

Why are graphics important?

The computer has created a whole new world of graphics accessible to most people today. This new communication technology is important in creating support graphics and presentations to promote your ideas or concepts. It doesn't matter what field you choose - you will have the need for graphics and/or presentations. This course allows you to develop a solid understanding of this media and the ability to present your ideas and concepts in an interesting and an exciting way.

Transportation Technology

TTJ 201 (Grade 10)

G10

Transportation Technology

What is Transportation Technology?

Transportation Technology introduces the student to the transportation of people and goods. In this course you will increase your knowledge about all forms of technology, how each form will effect our environment and how you, the consumer, influence this industry. The student will have the opportunity to experience how products are designed, manufactured and then assembled. Students will also be exploring alternative sources of power and modes of transportation which are important in our social and economical environment.

What will I be learning?

This program has been designed to enable students to build projects and to learn service procedures related to different modes of transportation. Students will have the opportunity to learn about the following areas of study: support systems for transporting people and products; measurement systems and methods; the analysis, design, and manufacture of a system to convert and to make practical use of energy; the function of major vehicle system components; the impact of transportation systems on the environment; communication skills, and transportation-related careers. This program will benefit students who will be operating a motor vehicle, and will provide students with a base foundation of automotive practices and principles.

TTG 201

Art & Design Level #1 • Advertising

TDJ 2MT / 3ET (Grade 11)

Print and Web Publishing

G11

Art & Design • Advertising

Purpose: Concentrating on applied art, design and layout as it relates to advertising agencies and design studios, and to enhance the skill and knowledge levels of the students in the main areas below.

What is it about?

Publishing Technology has had major changes in the last 10 years. This courses will show the students what the publishing industry has under gone, what is happening today and why it is happening. Students will have the opportunity to use the same current industrial software the professionals are using.

What will be studied?

1. **Systems & General Publishing Knowledge:** This section deals with different systems, terminology and history of the printing industry.

2. **Art, Design and Layout:** The course will be looking at the applied side of art, design and layout. Also, we will be learning the different types of layout methods and setups used in the industry. Students will be asked to create rough layouts, then work the rough layout through to the finished artwork which will be suitable for print or web publication.

3. **Print Publishing:** Using Adobe Illustrator/CorelDraw, students will explore the power of this draw programme used in the Graphic Arts industry to develop graphic illustrations and logos. For the second part of the print unit the students will be using a layout programme PageMaker/InDesign. With the layout programme students will be assembling their designs. The designs will range from retail ads, packaging, form design, and corporate identification.

4. **Web Publishing:** Using Macromedia's Flash, students will develop Flash and Shockwave 2D animations with sound for use on the Internet and/or MultiMedia presentations. For the second part of the web unit the students will be exploring the three methods of creating html pages (raw coding, low-end editors and high-end editors).

No coding knowledge is required for the web publishing section.

Why are graphics important?

Everyone needs to show off or demonstrate their ideas no matter what profession they enter. The better one can present their ideas, the better the chance they will have to succeed in the future. This is an ideal course to develop the skills required to promote your ideas and concepts.

TDJ 3MT
TDJ 3ET

Automotive Technology Level #1 Workplace for Transportation Part 1

TTJ 3CT / 3ET (Grade 11)

G11

Automotive Technology L1 Workplace for Transportation P1

In these two grade eleven courses in Transportation the student can gain valuable credits or start an apprenticeship in the auto industry. These Transportation courses will give valuable skills and knowledge that you will take and apply in your everyday life.

TTJ 3CT is for a College credit.

The Transportation Technology program places an emphasis on technical writing and vehicle design to prepare students for entry into College and/or University Engineering programs. This program provides students with a hands-on application of vehicle design practices. Students will gain practical experience by participating in a wide range of applied projects.

TTJ 3ET is for workplace credit.

The Transportation Technology Workplace program has been designed to prepare students for an apprenticeship or industry-related occupations; for example, Auto Mechanic, Motorcycle Mechanic, Small Engine Mechanic, Mill Wright, Welder, etc. Students have the opportunity to participate in hands-on applied projects, and work in teams on specific projects related to the course of study.

TTJ 3CT
TTJ 3ET

Computer-Aided Drafting

TDJ 3MD / 3ED (Grade 11)

G11

Computer-Aided Drafting

This Computer-Aided Drafting course is designed for Grade 11 students looking for a career path in a subject area which requires a CAD program.

TDJ 3MD is for a University and College credit.

This is an introductory course which will prepare students going to University or College with CAD skills giving them an advantage when taking University and College courses. Many University and Colleges require students to have the basics in a CAD program before taking certain courses.

TDJ 3ED is for workplace credit.

This is a great course for students interested in going directly into a work place position after high school. The Technology Department will be working with the Co-op Department to give these students workplace experience in the industry before leaving high school.

This course is designed to develop students' skills with Computer Aided Drafting (CAD) software. The focus of study will be on becoming familiar with AutoCAD (2000 LT) through various exercises and problem-solving techniques. Artistic talent is not required. However, basic computer skills are recommended.

What is Important About this Course?

While students are learning basic technical drawing skills on the computer, they will also be increasing their general technical knowledge. An understanding of this graphic program is important for anyone who intends to work in the industry. Experience in AutoCAD could lead to possible careers in manufacturing, engineering, architecture and building, and construction to name a few. Even in everyday life, knowledge of technical drawing is helpful in understanding house plans, assembly of products, maintenance and operating instructions for many manufactured products - even plans and specifications for hobbies.

TDJ 3MD
TDJ 3ED

Cisco Networking Academy

TDJ 3MN / 3EN (Grade 11)

G11

Cisco Networking Academy

What is the Cisco Networking Academy?

Cisco Networking Academy is a computer delivered curriculum which teaches the concepts of network design and implementation. Students learn the basics of cabling and installation and work on routers and switches to create configurations which will implement the Internet. As they work through the course they will get an understanding of the complexity and expectations of the computer networking industry. They will cover the terminology and theory of the workplace and experience the practical technical labs which simulate the workplace environment. Students must have an interest and desire to work in a high tech environment with computers. They will be challenged to apply their knowledge to troubleshooting network problems on a regular basis.

What will be studied?

Students will work through an Internet driven curriculum with on-line tests and exams. The basis of the course is the OSI computer model which clarifies the way computer networks are designed. Students will learn the correct industry network terminology and industry cabling standards and will have the opportunity to make a variety of cables for the variety of uses in the lab and around the school. Students will learn to configure and test routers, the workhorses of the Internet.

Where will it lead?

Upon successful completion of the Cisco Networking Academy (Grades 11 & 12), the student may (at his/her own expense) apply to write the exam for their CCNA certification which is highly valued in the industry.

TDJ 3MN
TDJ 3EN

Food Preparation & Hospitality

TFH 3E1 & TFT 3C1 (Grade 11)

G11

Food Preparation & Hospitality

What is it about?

This course...

What will be studied?

1. *Unit Block:*

2. *Unit Block:*

3. *Unit Block:*

4. *Unit Block:*

What is important about this course?

This Course....

TFH 3E1
TFT 3C1

MultiMedia Level #2

TGJ 3MW / 3EW (Grade 11)

3D Animation • AudioVideo • PhotoShop

G11

MultiMedia • Level #2

What is it about?

Multimedia Level 2 will introduce the student to the multimedia side of industry today. Students will examine systems, raster images, digital cameras, video editing software/equipment and 3D animation software. Students will be required to develop their concepts for use in either the school's TV studio, electronic bulletin board or display cases.

What will be studied?

1. **Systems:** This section deals with different systems, terminology and history of the computer, video and cameras.
2. **PhotoShop:** Students will examine the different features and tools in PhotoShop which are important for creating graphics for Video, textures and graphics for 3D animations. PhotoShop is one of the most important software programmes in use throughout the movie and animation industry.
3. **Videography:** Students will use digital video camera and a non-linear editing software to create a video production. The unit will be looking at the different steps in making a production, creating a script and storyboards, lighting, blue screen and more...
4. **3D Animation:** Maxon's Cinema 4D XL will introduce the student to 3D animations. They will learn the skills and knowledge needed to create a simple animation. This animation package is a popular software programme and is used extensively in the industry.

What is important about this course?

This new technology is exploding with many exciting job opportunities. Students will have an opportunity to see where this training may lead in regards to future employment. It also allows the student to better understand this media which they are exposed to everyday.

Students will have the opportunity to compete in competitions. This is a great way to start building a portfolio for post-secondary education.

TGJ 3MW
TGJ 3EW

Art & Design Level #2 • Advertising

TDJ 4MT / 4ET (Grade 12)

G12

Art & Design • Advertising

Purpose: Exploring what Advertising Agencies and Design Studios are all about. The focus will be on applied art, creativity and the work ethic that reflects the workplace.

What is it about?

Establishing an environment in the classroom that best reflects agencies and studios. Second is to pushing the creative limit in as many of the main areas as one would deal with in the workplace. While working through the main areas students will be creating samples for their portfolio.

What will be studied?

1. **Systems & General Publishing Knowledge:** This section deals with different systems, terminology and history of the publishing industry.
2. **Exploring Creativity:** This is the key component which everything revolves around. Creativity is similar to a water tap, when you turn the tap on you get water flowing out, however, creativity does not always flow out when you turn the tap on. We will be exploring different techniques which can help keep that creativity flowing.
3. **Adobe Illustrator:** Using Adobe Illustrator students will explore the power of this important draw programme used in the graphic arts industry. Students will develop an understanding for the discipline required to create and design (.eps) graphics suitable for a publication.
4. **Adobe PhotoShop:** Using Adobe PhotoShop the leading raster software for the industry, students will develop the skills required to create or manipulate images for publishing. We will be looking at cropping and close cropping of images, colour correcting, mode changes, masking, scanning, resolution adjustments and the variety of industrial file formats, advantages and limitations as well as reasons for exporting.
5. **Adobe InDesign:** InDesign will be used to learn the different types of layout methods and setups used in the industry. Students will be asked to create layouts as a rough comp and then work them through to the finished artwork on the computer which will be suitable for publication.
- 6: **Adobe Acrobat:** This is one of the fastest growing pieces of software in both the business and graphic areas today. We will be creating and optimizing (Distiller) these files for industrial use.

The concept is only half the way. Being able to quickly and efficiently put the concept together is what will give the power to get the ideas across effectively. No matter where you go after high school this course will help you present your idea quickly and efficiently.

The next level in design and publishing is Graphic Arts (TGJ 4MT) where students create industrial samples for their portfolio.

TDJ 4MT
TDJ 4ET

Automotive Technology Level #2 Workplace for Transportation Part 2

TTJ 4CT / 4ET (Grade 12)

G12

Automotive Technology Workplace for Transportation

In these two grade twelve courses in Transportation the student can gain valuable credits or start an apprenticeship in the auto industry. These Transportation courses will give valuable skills and knowledge that you will take and be able to apply in your everyday life.

TTJ 4CT is for a College credit.

This Transportation Technology program is a continuation of the Grade 11 program. This course provides students with an in-depth exploration of the technical design and application of current automotive industry vehicle systems. This program prepares students for College and/or University Engineering programs. The student will have the opportunity to gain hands-on experience and a working knowledge of transportation technology. Projects are designed to enable students to work together, and to develop necessary skills to be successful when working in teams.

TTJ 4ET is for workplace credit.

The Transportation Technology Workplace program has been designed to prepare students for an apprenticeship or industry-related occupation; for example, Auto Mechanic, Motorcycle Mechanic, Small Engine Mechanic, Mill Wright, Welder, etc. Students have the opportunity to participate in hands-on applied projects, and work in teams on specific projects related to the course of study.

TTJ 4CT
TTJ 4ET

Cisco Networking Academy

TGJ 4MN / 4EN (Grade 12)

G12

Cisco Networking Academy

What is the Cisco Networking Academy?

Cisco Networking Academy is a computer delivered curriculum which teaches industry concepts of networking design, implementation. This course is a continuation of the Grade 11 curriculum. Students begin a “threaded case study” in order to apply what they have learned about LAN (Local Area Network) design in the previous course. They continue on with a study of WAN (Wide Area Network) design and implementation, and they make the necessary WAN design additions to their major case study project.

Prerequisite

Students must have successfully completed Cisco Networking Academy Program TDJ3E/M7 (Grade 11).

Where will it lead?

Upon successful completion of the Cisco Networking Academy Grades 11 and 12, the student may (at his/her own expense) apply to write the exam for the CCNA (Certified Cisco Networking Associate) industry certification. This is a highly valued certification for anyone interested in working in the computer networking industry.

TGJ 4MN
TGJ 4EN

Food Preparation & Hospitality

TFH 4E1 & TFT 4C1 (Grade 12)

G12

Food Preparation & Hospitality

What is it about?

This course...

What will be studied?

1. *Unit Block:*

2. *Unit Block:*

3. *Unit Block:*

4. *Unit Block:*

What is important about this course?

This Course....

TFH 4E1
TFT 4C1

Graphic Arts • Publishing

TGJ 4MG / 4EG (Grade 12)

G12

Graphic Arts • Publishing

Purpose: Is to give students a solid understanding of the process and problems as they work through the first design right up to the finished product. Priority is given to creating industrial samples for their portfolios, evaluating process and pricing.

What is it about?

This course will be looking at the three basic entry levels into the publishing industry: Creative (writing and designing), Production (sales and shop management) and Processing (neg. production, assembly and printing). Each of these three have many different entry points which will be explored. Level two in publishing technology will introduce the students to both the skills and knowledge required for entry level positions.

What will be studied?

1. **Creativity** (writing and designing): The applied side of art and how it works is studied. What creativity really is and how the industry looks at art and design will be examined. We will examine copywriting, promotional writing, support writing and the details on finding and researching technical manuals and tutorials used in industry.
2. **Promotion** (sales and shop management): Expectations and directions are looked at in this area. Dealing with sales executives and production managers and understanding their crucial role in the print and production areas will be examined. Simulated situations will be set up to give the students an understanding of these vocations.
3. **Processing** (neg. production, stripping and printing): The processes in printing will be studied so the student can get a grasp of the complete picture of this huge industry. Each area will be examined as we will look at the different entry levels, the future of print publishing versus web publishing, and the knowledge and skills required when designing print materials.

The skills and knowledge in creating graphics and print materials to promote your concepts and ideas are invaluable no matter what career directions you take. It has been proven over and over again in industry that the better you can present your concepts and ideas, the greater your chances are in being successful.

TGJ 4MG
TGJ 4EG

MultiMedia Level #3

TGJ 4MW / 4EW (Grade 12)

3D Animation or Web Publishing • Project-Driven Courses • No Exam

G12

MultiMedia Level #3

Students will choose between Animation or Web Publishing. The course will be Project-Driven. Student's final evaluation will be based on their final project.

What is the Animation course about?

This course is a 3D Animation production class. Students will be using Maxon's Cinema 4D XL. The software will give the students experience working with professional animation a programme and working on a mini-production. As the students work through the course, they will gain an understanding of the complexity and the demands prevalent in the computer industry today. It is important that the student have the grade 11 experience in 3D Animation. The animation course is an exciting and fascinating course which is fun and demanding.

What will be studied?

The focus on the course is to develop an animated production with a story line and a sound track. Students will work through the three different steps: Pre-Production, Production and Post-Production to develop their animation in teams of one or two.

Pre-Production: Students will develop a story, script, storyboard, characters and props for their animation.

Production: Each student will be assigned sections of the story to model and animate.

Post-Production: Student will create the credits, assemble the rendered sequences, add the sound track(s) and any voice over. Once everything is completed, the students will burn the animation to CD Rom.

What is Web Publishing course about?

This course is meant to provide students who took the grade 11 MultiMedia course and wish to continue web development to the next level. Students will work with the high-end editors to create sites. Students will also compare and develop animated web graphics in both frame and time sequencing software to be used with their web creations.

What will be studied?

Adobe's PhotoShop, Macromedia's Flash and Dreamweaver will be explored by completing given exercises. Students will create a specialized sites and will be required to develop page sections for the MGCI web site and the Adult Learning Network for publishing on the Toronto District School Board web site.

No coding knowledge is required for the WEB or animation course.

Competitions: All animation and web sites are aimed for competition which could be at the school, board or provincial level.

TGJ 4MW
TGJ 4EW