CAREER AND TECHNOLOGY STUDIES AT ROSS SHEPPARD

The CTS program is a complementary program that students will find useful for both personal use as well as for post-secondary education. Personal use centers around how the student might use the knowledge, skills, and attitudes developed in CTS classes for use in daily living, both in and out of school. CTS courses can develop proficiencies in foods and fashion, computer use in a variety of ways, and in such areas as visual communications and the development of a hobby.

In addition, the CTS program responds to the need for students to develop technology-related skills and begin serious exploration of their career options by integrating basic competencies – employability skills – into classroom projects and activities. For those students who complete CTS programs, a world of opportunities will be open for post-secondary education and direct entry into the workplace.

Articulation with Junior High School CTS Programs

We value and appreciate the efforts that are made by Junior High Schools with regard to Career and Technology Studies. Students are provided with many valuable learning experiences as they are introduced to the various CTS strands that are offered. We have found that students arrive at high school with a variety of skills.

Students entering senior high CTS programs, who have previous experience at junior high school, will be given the opportunity to demonstrate these skills to their high school teachers.

It is our belief that challenge of CTS credits be provided through an enrichment process. That is, students will not automatically be granted advance standing, however, students will be encouraged to work through the projects and assignments at their best rate. Once they complete the required materials for a given course, additional materials will be available that are not part of the normal course work. In this way, students who can demonstrate a broader understanding will learn new concepts and may be able to earn additional credits. This process also ensures that students will have a common base of skills and knowledge for success in future courses in the CTS program.

Career and Technology Studies

Finance & Management 10	→ Finance & Management 20	→ Finance & Management 30
Computer Applications 10	→ Computer Applications 20	→ Computer Applications 30
Computer Programming 10	→ Computer Programming 20	→ Computer Programming 30
		→ Multimedia Studies 30
		→ Web Page Design and Construction 30
Computer Assisted Drafting 10	→ Computer Assisted Drafting 20	→ Computer Assisted Drafting 30
Visual Communications 10	→ Visual Communications 20	→ Visual Communications 30
Foods 10	→ Foods 20	→ Foods 30
Fashion Studies 10	→ Fashion Studies 20	→ Fashion Studies 30
		→ Legal Studies 30
Wildlife Studies 10		

Computer Applications 10 - 3 credits

Prerequisite – None

CTS Courses
INF 1010 - Computer Operations
INF 1030 - Word Processing 1
INF 1040 - Graphic Tools
Additional CTS courses which students may complete if they have received credit in the above CTS courses are the following –
INF 1020 - Keyboarding 1
INF 2030 - Keyboarding 2
INF 1050 - Database 1

This course provides students with the opportunity to develop introductory skills at word processing and keyboarding, as well as the introduction, integration, and use of graphic tools. File management and workstation routines using the basic principles of Windows will be included.

Computer Applications 20 - 3 credits

Prerequisite – Computer Applications 10

CTS Courses:
COM 2120 - Intermediate Digital Design
INF 2050 - Word Processing 2
INF 1060 - Spreadsheet 1
Additional CTS courses which students may complete if they have received credit in the above CTS courses are the following –
INF 2040 - Keyboarding 3
INF 2060 - Electronic Publishing 1
Plus the Computer Applications 10 mandatory CTS courses and any additional Computer Applications 10 CTS courses.

This course provides students with the opportunity to further develop their computer application skills with exercises from a business perspective. Students will develop intermediate word processing skills, and learn how to work in a spreadsheet environment to do general data manipulation and personal record keeping. Students will also learn how to do multimedia presentations. This course will provide a greater understanding of the various Microsoft Office applications and enable students to use this knowledge in school and the world of work.

Computer Applications 30 - 3 credits

Prerequisite – Computer Applications 20

CTS Courses:
Com3130 – Advanced Digital Design
CTR3020 – Project 3B
INF2080 – Spreadsheet 2
Additional CTS courses which students may complete if they have received credit in the above CTS courses are the following –
CTS Courses:
INF3030 – Keyboarding 4
INF3040 – Keyboarding 5
INF3050 – Keyboarding 6
INF3060 – Word Processing 3
INF3070 – Electronic Publishing 2
Plus the Computer Applications 20 mandatory CTS courses and any additional Computer Applications 20 CTS courses.

This course provides students with the opportunity to further develop their computer applications skills at an advanced level. Students will use advanced spreadsheet techniques to calculate and manipulate data in the preparation of various text and graphic reports. Students will integrate a variety of graphic, text, and audio files that they create, edit and manage. Projects and problem-solving will be a focus.

COMPUTER PROGRAMMING

The Computer Programming strand provides students with the opportunity to learn a variety of scripting and programming languages for personal use or as an introduction to a computer programming program at a post-secondary institution. Students who complete the computer programming strand will have enough understanding to pursue further study in computer programming at the University level, at NAIT, or through private training.

Computer Programming 10 – 3 credits

Prerequisite – none

CTS Courses:
INF1090 – Information Highway 1
INF2200 – Information Highway 2
INF3190 – Information Highway 3

This course will introduce students to the concepts required to create and maintain well designed web pages and web sites. HTML scripting will be used as an introduction to the structure and syntax of computer programming. Students will also be introduced to JavaScript to add interactivity to their web pages.

Computer Programming 20 - 3 credits

Prerequisite – Computer Programming 10

CTS Courses:
INF1080 – Programming 1
INF2150 – Programming 2
INF2160 – Programming 3

In this course students will learn computer programming through the use of a Rapid Application Development (RAD) environment and will develop skills in object oriented programming. Students will learn how to use Visual Basic to create Windows programs.

Computer Programming 30 - 3 credits

Prerequisite – Computer Programming 20

CTS Courses:
INF2170 – Programming 4
INF2180 – Programming 5
INF3150 – Programming Application 1

Students will be introduced to a second Windows development application through the use of the C^{++} programming language. Emphasis will be placed on developing logic and problem solving skills to solve more advanced programming problems.
Extra Credit –
Extra CTS courses related to computer programming are available on an individual basis. Students should talk to their teacher about a special projects program.

Computer Science I.B. – 6 credits

FRAN: PLEASE ALSO INCLUDE THIS IN THE I.B. SECTION OF THE BOOK

Prerequisite – None

CTS Courses:
INF1080 – Programming 1
INF2150 – Programming 2
INF2160 – Programming 3
INF2170 – Programming 4
INF2180 – Programming 5
INF3150 – Programming Application 1

Computer science deals with the solving of problems using computers. Therefore a full understanding of logical problem-solving is required as well as a detailed knowledge of how computers operate. Students of IB computer science will be guided by problem-solving strategies that will be continually reinforced in their coursework. Initial stages of the process will involve identifying and defining problem(s) to be solved by a computerized system. The problem will be broken down into parts, each one of which requires a particular solution. From this problem definition, students will construct appropriate algorithms to create a solution. The Computer Science I.B. course will provide students with the Standard Level (SL) course and will focus on software development, fundamentals of computer systems and the relationship between computing systems and society.

Virtual Classes

Some students find it difficult to take all of the classes they might wish to because they can not fit everything into an eight period schedule. For this reason, students may wish to consider taking a "virtual" computer programming class. Students who choose this method of instruction will need to by highly motivated and able to work on their own, as all instruction will take place outside of class time using the World Wide Web. Students will be required to meet on a regular basis with their teacher and will be required to provide weekly updates as to their progress. Students must also have a computer at home capable of connecting to the Internet.

The Virtual Computer Programming Course is open only to those students who can not fit a Computer Programming class into their regular schedule – this course is not intended to be a home schooling alternative. If you need to enroll in this course, please see Dr. Mathew and your coordinator for the necessary enrolment form and contract.

OTHER COMPUTER RELATED COURSES

Multimedia Studies 30 – 3 Credits

INF 1070 Hypermedia Tools 1
INF 2130 Multimedia Authoring 1
INF 3130 Multimedia Authoring 2

Students will create, manage, and produce a major multimedia production for a specified target audience. Using multimedia software, students will work with a variety of computerized files. These files may include data, text, graphics, video, audio and animation.

This course will only be offered if there is sufficient enrolment.

Web Page Design and Construction 30 - 3 credits

Prerequisite – none

The Web Page Design and Construction course will consist of three CTS Courses related to Computer Systems –

- COM1080 – Digital Design 1
- COM2120 – Digital Design 2
- COM3130 – Digital Design 3

This course will introduce students to technical and design issues related to Web Page Design, Construction and Hosting. This is not a programming course; rather, students will explore a variety of Web Page construction tools such as Adobe Acrobat, MacroMedia Flash, and Microsoft Front Page. A major component and area of discussion in this class will be design related issues. Students will be required to construct web sites for both personal and commercial use.

Note – some of the modules in this course are the same as modules used in Visual Communications. Students will NOT be granted credit for the same module taken more than once.

This course will only be offered if there is sufficient enrolment.

COMPUTER ASSISTED DRAFTING

Computer Assisted Drafting 10 - 3 credits

Prerequisite – none

CTS Courses:
DES1050 – CAD Fundamentals
DES1010 – Drawing Fundamentals
DES1030 – 2-Design Fundamentals

This course will introduce students to common drafting practices to produce drawings using Computer Assisted Drafting (CAD) software. Students will gain experience in drawing objects using correct types of lines, dimensioning, hatching, text, and much more.

Computer Assisted Drafting 10 - 6 credits

Prerequisite – None

CTS Courses:
DES1050 – CAD Fundamentals
DES1010 – Drawing Fundamentals
DES1060 – Multiview and Pictorial Drawings
DES2040 – Technical Drawing
DES1030 – 2-Design Fundamentals
DES1040 – Design Project

This introductory design course in drafting is the same as Computer Assisted Drafting 10 (3), but students will cover three additional CTS courses. Students will have the opportunity to develop design skills and gain more depth in CAD drawing.

Computer Assisted Drafting 20 - 6 credits

Prerequisite – 50% in Computer Assisted Drafting 10 (3 credits) or (6) (Formerly Design Studies 1A or 1D)

CTS Courses:
DES2030 – CAD Applications
DES2050 – Technical Drawing Applications
DES2010 – 2-D Design
DES3010 – 2-D Design
DES3070 – Living Environments – Human Needs
DES3140 – Technical Drawing – Elevations, Sections

This course in architectural drafting, using CAD software, deals with residential housing. After understanding the requirements and typical drawings necessary to build a house, each student will design and complete an actual set of drawings for a residence.

Computer Assisted Drafting 30 - 6 credits

Prerequisite – 50% in Computer Assisted Drafting 20 (Formerly Design Studies 2D)

CTS Courses:
DES3020 – 2-D Design
DES3160 – Technical Drawing Studio 3
DES3030 – Advanced 2-D Design
DES3080 – Living Environment – Form, Space
DES3090 – Living Environment – Materials
DES3040 – 3-D Design – Modeling

This course in architectural design and drawing using CAD software builds on the skills developed in Computer Assisted Drafting 20. Students will learn commercial design including structural systems and materials. An introduction to energy efficient structures and model building will also be covered.

BUSINESS MANAGEMENT COURSES

The Finance and Management strand provides students with the opportunity to be involved in various aspects of recording, analyzing and summarizing businesses finances. Students who complete the finance and management strand will have enough understanding to pursue an entry level position in industry or to study Finance and/or Accounting at a post-secondary institute such as University, NAIT or Grant MacEwan College.

Finance and Management 10 – 3 credits

Prerequisite – None

CTS Courses:
FIN1010 – Financial Information
FIN1020 – Business Transaction Analysis
FIN 1030 – The Accounting Cycle

This course will appeal to those students wishing to manage their own personal finances and/or manage the finances of a small business. Students study the accounting cycle of a service business by recording daily business transactions and preparing simple financial statements. They will be introduced to a spreadsheet (Excel) to be used as a tool to prepare these statements. Students also develop an awareness of the many career challenges and opportunities to be found in the financial management field.

Finance and Management 20 - 3 credits

Prerequisite – Finance and Management 10

CTS Courses:
FIN2020 - Retail Accounting Transactions
FIN2030 - Financial Statement Preparation
FIN2050 - Financial Simulation

Students apply specialized financial accounting procedures associated with the buying and selling of goods in a retail system. They will complete the accounting cycle for a merchandising business, study partnership accounting, prepare financial statements, and establish and operate a payroll system. They will also have the opportunity to complete a simulation for a merchandising business. Excel and Simply Accounting will be used to assist in preparing these records.

Finance and Management 30 – 6 credits

Prerequisite – Finance and Management 20

CTS Courses:
FIN2010 – Taxation (Personal & Small Business)
FIN3020 – Management Accounting
FIN3030 – Business Organizations
FIN3040 – Financial Statements
FIN3060 – Financial Analysis
CTR3030 – Stocks and Investments

Students work in a computer lab on Simply Accounting and Excel to apply advanced accounting procedures for both partnerships and corporations. They study how to analyze and interpret data to make management decisions as well as exploring the impact of economic trends, changing world markets and tax implications, all of which must be considered when preparing financial forecasts. They will also receive the opportunity to study the stock market by being involved in a simulation with the University of Waterloo and to prepare Income Tax forms using computer software. Further emphasis will be placed on careers in the financial management field.

Legal Studies 30 - 5 credits

Prerequisite – None

CTS Courses:
LGS 1010 – You and the Law 1
LGS 3010 – Consumer and Property Law
LGS3040 – Negligence
LGS3060 – Controversy and Change
LGS3080 – Criminal Law

The student will receive one credit for successful completion of each module.

Legal Studies 30 introduces students to their rights and obligations under the law. After a general introduction of what an average citizen should know, student study in more detail such topics as – criminal law, consumer and property law, negligence, and controversy and change within our legal system.

FOOD STUDIES

Foods 10 - 3 credits

Prerequisite – None

CTS Courses:
FOD1010 – Food Basics
FOD1020 – Baking Basics
FOD2080 – Vegetables, Fruits, Grains

Foods 10 is an introductory course that will help students understand the nutritional needs of individuals, particularly adolescents. This knowledge will be applied to the selection, preparation, and presentation of food from the four food groups.

Foods 20 - 3 credits

Prerequisite – Foods 10

CTS Courses:
FOD2060 – Milk Products and Eggs
FOD2100 – Basic Meat Cookery
FOD2050 – Yeast Breads and Rolls

This course will help students understand and evaluate the role of specific nutrients in the daily diet. Increased emphasis is placed on student selection, preparation and presentation of food.

Foods 20 - 6 credits

Prerequisite – Foods 10

CTS Courses:
FOD2060 – Milk Products and Eggs
FOD2100 – Basic Meat Cookery
FOD2050 – Yeast Breads and Rolls
FOD2170 – International Cuisine
FOD2040 – Cake and Pastry
FOD3020 – Nutrition and Digestion

This is a more in depth course that Foods 20 (3). Additional topics emphasize the symbolic meaning of food within different cultural groups.

Foods 30 - 6 credits

Prerequisite – Foods 20

CTS Courses:
FOD3010 – Food Through the Life Cycle
FOD3030 – Creative Baking
FOD2120 – Meal Planning
FOD3050 – Advanced Soups/Sauces
FOD3100 – Entertaining with Food
FOD3070 – Short Order Cooking

Special nutritional needs of the various stages in the life cycle will be demonstrated and practiced. Students will develop competence in advanced food preparation and presentation techniques to prepare creative meals.

FASHION STUDIES

Fashion Studies 10 - 3 credits

Prerequisite – none

CTS Courses:
FAS1030 – Ready, Set, Sew
FAS1040 – Fashion Basics
FAS2080 – Active Wear

Fashion Studies 10 is an introductory course on the basics of sewing and equipment use. Students will produce garments to suit individual choices.

Fashion Studies 20 - 3 credits

Prerequisite – Fashion Studies 10

CTS Courses:
FAS2070 – Creative Construction
FAS2090 – Specialty Fabrics 1
FAS2110 – Creative Home Décor

Students will enhance their sewing skills using advanced techniques. Students will also experiment with specialty fabrics and apply design techniques to create a home decor.

Fashion Studies 30 - 6 credits

Prerequisite – Fashion Studies 20

CTS Courses:
FAS3090 – Specialty Fabrics 1
FAS3070 – Creators of Fashion
FAS2120 – Surface Embellishment
FAS3040 – Contemporary Tailoring
FAS2060 – Pattern Drafting 1
FAS2100 – Sewing for Others

Students will develop in the areas of applying sewing knowledge and techniques. The major themes are largely production and design.

VISUAL COMMUNICATIONS

Visual Communications offers opportunities for students to learn, understand and apply techniques to communicate their ideas through visual media. The program covers Design through various techniques including Print, Photography and Digital Images.

Visual Communications 10 - 3 credits

Prerequisite – None

CTS Courses:
DES1020 – The Design Process
COM1030 – Photography 1
COM1050 – Printing 1

Projects will be completed in the basics of Design and Colour Theory, Black and White Photography and Screen Printing. Students will use various computer programs to assist in the completion of these projects.

Visual Communications 20A - 3 credits

Prerequisite – Visual Communications 10

CTS Courses:
COM2020 – Media Design and Analysis
COM2040 – Photography 2
COM2070 – Printing Techniques 1

Visual Communications 20D - 6 credits

Prerequisite – Visual Communications 10
Students will take the CTS courses listed above plus -

CTS Courses:
COM2050 – Photographic Communication
COM2080 – Printing Applications 1
COM2120 – Digital Design 2

Students will have the opportunity to further their knowledge, skills and technique in the areas introduced in Visual Communications 10. Projects will be directed toward specific purposes or "clients".

Visual Communications 30A - 3 credits

Prerequisite – Visual Communications 20

CTS Courses:
COM3020 – Media Design Analysis 2
COM3040 – Photography 3
COM3080 – Printing Techniques

Visual Communications 30D - 6 credits

Prerequisite – Visual Communications 20
Students will take the CTS courses listed above plus -

CTS Courses:
COM3050 – Photojournalism
COM3090 – Printing Applications 2
COM3130 – Digital Design

Wildlife Studies 10 (3)

WLD1010: What is Wildlife?
WLD1020: Natural History of Wildlife
WLD1050: Taking Responsibility

Wildlife is an important part of Canada's heritage. Canada is one of the few places in the world that still maintains large and natural ecosystems. Natural and wilderness areas of Canada contribute greatly to our quality of life and functioning of the global ecosystem.

Wildlife Studies 10 will provide opportunities for students to view themselves as a part of the global ecosystem. Students will be encouraged to share information and beliefs regarding environmental sustainability, and recognize the need to make informed choices to sustainable levels.