



Subject Table Handbook Technology Education

Student Records System
and Professional School
Personnel System

September 2003 —
June 2004

**SUBJECT TABLE HANDBOOK
TECHNOLOGY EDUCATION**

Student Records System and Professional School Personnel System

September 2003 – June 2004

2003

Education and Youth

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INTRODUCTION

PURPOSE

The purpose of the *Subject Table Handbook: Technology Education* is to support schools in the 2003-2004 school year by:

- providing basic information to assist schools in completing the Professional School Personnel system (PSP) forms
- providing basic information to schools for entering student records into the Student Records system (SRS)
- providing subject computer codes for courses developed by Manitoba Education and Youth, and for those approved or registered by the Department

A new edition of the *Subject Table Handbook* is distributed at the beginning of each school year. It reflects changes to course codes, credits, etc. that apply for the upcoming school year. Schools are responsible for ensuring that they are using the appropriate edition of the Handbook when recording student marks for Professional Certification and Student Records Unit in Russell, Manitoba. **Note that schools must use the September 2002-June 2003 Subject Table Handbook for reporting 2002-2003 student marks in the summer and fall of 2003.**

This edition of the *Subject Table Handbook: Technology Education* - in effect from September 2003 to June 2004 - is available online at the following address; <http://www.edu.gov.mb.ca/ks4/docs/policy/sthte/index.html>. Placing the content of the Handbook online provides information about course codes, levels, and credits to accommodate schools in setting up their registrations and course offerings for the next school year. Some changes will occur over the 2003-04 school year as new curricula are released. The online content will be updated several times during the year, but schools should exercise some caution when setting up their course codes in the spring.

A Manitoba Education funding review in 1991 resulted in changes in the categorical grants for vocational programming. The changes moved funding from a program focus to a unit-credit focus. As a result, unit-credit titles have been identified for Technology Education - Vocational Industrial, Industrial Arts, and Home Economics. For those curricula developed and/or approved by the Department, committees of teachers met and unit-credit titles were identified. For those curricula developed at the local level, but approved by the Department, the teachers who delivered the courses submitted unit-credit titles for review to the Department. These two processes resulted in the identification of approximately eight hundred unit-credit titles. To meet the needs of students who want to maximize their Technology Education options in Senior Years, half-credits have been identified for some Senior 1 and 2 courses.

SENIOR YEARS CREDIT SYSTEM

The Senior Years (Senior 1-4) credit system provides flexibility to enable students to pursue Senior Years courses best suited to their individual requirements and aspirations. Students may earn *one credit* by undertaking and successfully completing a course of study designed for a minimum of 110 hours of instruction. *Half credits* (courses designed for a minimum of 55 hours of instruction) may be earned in like manner. There are two categories of credits: Compulsory and Optional.

INCREASED CHOICE AND FLEXIBILITY: CHANGES TO SENIOR YEARS GRADUATION REQUIREMENTS

In the 2003-2004 school year, all students must graduate under *Increased Choice and Flexibility: Changes to Senior Years Graduation Requirements* released in March 2001. For graduation requirements please see <http://www.edu.gov.mb.ca/ks4/policy/gradreq/choice-flexibility.html>. For a status update on the above report please see *Increasing Choice and Flexibility: Changes to Senior Years Graduation Requirements: A Status Report* (June 2002), at http://www.edu.gov.mb.ca/ks4/policy/gradreq/choice-flexibility_june02.html.

SENIOR YEARS COURSE IDENTIFICATION

Course Numbering

The present course numbering system comprises a 3-character, alpha-numeric code. The first and second characters are numerals, while the third is a letter.

- **First Character**
 - 1 - for courses developed for Senior 1
 - 2 - for courses developed for Senior 2
 - 3 - for courses developed for Senior 3
 - 4 - for courses developed for Senior 4

- **Second Character**
 - 0 - developed by Manitoba Education and Youth for 1 credit
 - 5 - developed by Manitoba Education and Youth for ½ credit
 - 1 - developed by schools or school divisions and registered by Manitoba Education and Youth (includes SICs and SIPs)
 - 2 - externally developed by an educational authority and, in the case of dual credit, a post-secondary institution (e.g., university, out-of-country).

- **Third Character**
 - G - General
 - F - Foundation
 - S - Specialized
 - E - ESL
 - M - Modified
 - I - Individualized
 - C - College-based
 - U - University-based

Course Designations

Foundation (F): Educational experiences which are broadly based and appropriate for all students and which may lead to further studies beyond the Senior Years (e.g. apprenticeship, college, and university). When new curricula and policies are implemented, as outlined in Departmental correspondence to the field, this designation will come into effect provided the curriculum is a foundation course leading to further study. The definition appears here to indicate that course identification changes will be implemented as new curricula are implemented. **Do not report marks using this designation until you are advised to do so by the Department.**

- General (G):** General educational experiences for all students. The G designation will be retained for Independent Study and Teacher-Mediated courses in all areas until these courses are revised. As system-wide use of new curricula is mandated, the G designation will be phased out. All School-Initiated Courses (SICs) and Student-Initiated Projects (SIPs) remain as G designation. Industrial Arts and Home Economics courses may be identified as General (G) or Specialized (S) at the Senior 3 and Senior 4 levels.
- Specialized (S):** Educational experiences in specialized areas leading to further studies beyond the Senior Years (e.g., apprenticeship, college, and university). Business Education and Marketing Education courses at Senior 2 to Senior 4 and Vocational Industrial courses at Senior 1 to Senior 4 are designated as Specialized (S).
- ESL (E):** Educational experiences designed to assist students for whom English is not a first language in making a transition into the English Program; an Individual Education Plan (IEP) is required for each student.
- Modified (M):** Educational experiences intended for students with significant cognitive disabilities and where the provincial subject area curriculum outcomes have been modified by 50 per cent or more to take into account the learning requirements of a student; an Individual Education Plan (IEP) is required for each student.
- Individualized (I):** Educational experiences intended for students with significant cognitive disabilities and that are developmentally and age appropriate and highly individualized to take into account the learning requirements of the student; an Individual Education Plan (IEP) is required for each student.
- NOTE:** Students in individualized programming do not use Manitoba Education and Youth curricula. The designation indicates student participation in individualized programming. For example, 1I indicates year one of student participation in locally developed programming individualized for the student; 7I indicates year seven of such participation.
- College-based (C):** Educational experiences at the college level that can be used for dual credits; credit at the Senior 3 and Senior 4 levels and also for the first year of college.
- University-based (U):** Educational experiences at the first year university level that can be used for dual credits (credit at the Senior 4 level) for senior years graduation purposes and also for first year university.

Course Levels

- Senior 1:** All subject area curricula, except vocational industrial, will be developed as foundation courses. Some technology education curricula may be developed as specialized courses. The Foundation (F) course designation will replace the General (G) course designation as a new curriculum comes into effect.
- Senior 2:** As new curricula are introduced, all subject area curricula, except vocational industrial, science, and mathematics, will be developed as Foundation (F) courses. Some curricula for technology education, science, and mathematics may be developed as Specialized (S) courses.
- Senior 3:** As new curricula are introduced, a variety of subject area curricula will be developed for different purposes, including a range of Foundation (F) and Specialized (S) courses.
- Senior 4:** As new curricula are introduced, a variety of subject area curricula will be developed for different purposes, including a range of Foundation (F), and Specialized (S) courses. Currently, curricula are developed for General (G) and Specialized (S) courses. Courses that qualify for a U designation are first year University Courses. Those that qualify for a C designation are first year College courses.

From Senior 1-4, a particular Foundation, General and/or Specialized subject area curriculum can be modified on an individual basis via a student's Individual Education Plan following Departmental requirements. The M or E course designation then applies.

NOTE: No Departmental regulation will prevent a student from taking a designated course in one senior year and then switching to a different designation in a later year.

Examples:

- | | |
|---|--|
| Senior 1 Intro to Electronics (10S) | Senior 1, developed or approved by Manitoba Education and Youth for 1 credit, Specialized course. |
| Senior 1 Introduction to H.I. Tech (15S) | Senior 1, developed or approved by Manitoba Education and Youth for ½ credit, Specialized course. |
| Senior 1 Family Studies (15M) | Senior 1, developed or approved by Manitoba Education and Youth for ½ credit, General course modified in curriculum goals and objectives or outcomes by 50% or more to accommodate students with significant cognitive disabilities. |

Senior 2 Family Studies (25G)	Senior 2, developed or approved by Manitoba Education and Youth for ½ credit, General course.
Senior 3 Machine Tool Technology (30G)	Senior 3, developed or approved by Manitoba Education and Youth for 1 credit, General course.
Calculus 1 (KC.MSC.1510) (42C)	Senior 4, a first year college level course for dual credits, developed by a college and approved by Manitoba Education and Youth for one-half credit, College-based course.
Introductory Psychology (44.1000/6) (42U)	Senior 4, a first year university level course for dual credits, developed by a university and approved by Manitoba Education and Youth for one credit, University-based course.

CHALLENGE FOR CREDIT

The Challenge for Credit Option offers students the opportunity to apply prior knowledge in a particular subject area by demonstrating achievement in the learning outcomes of that course/ speciality and receiving credit for it. For information on *The Challenge for Credit Option* refer to http://www.edu.gov.mb.ca/ks4/policy/gradreq/choice_attacha.pdf

CREDIT FOR COMMUNITY SERVICE (STUDENT -INITIATED PROJECT - SIP)

Students may earn one community Service credit (in the form of a SIP) within the 28 credits for graduation. These SIPS consisting of volunteer service are not to be registered with the Department. A Community Service SIP course code (8977) is available. Guidelines for this SIP are available at http://www.edu.gov.mb.ca/ks4/policy/gradreq/choice_attachb.pdf

DISTANCE LEARNING COURSES:

Students may take compulsory or optional courses in either print or online format including courses delivered from outside the province. Two documents on distance learning were recently sent to Manitoba schools: http://www.edu.gov.mb.ca/ks4/docs/policy/online_learning

Compulsory Courses: The course codes for in-province compulsory and optional distance learning courses that are based on Manitoba curricula are the same codes that are used for in-class instruction e.g. 0092 ELA: A Comprehensive Focus 40S

Optional Courses: The distance learning optional courses delivered by an out-of-province educational authority will be reported using 12G, 22G, 32S, and 42S designations. Some broad categories of computer codes have been provided, however, should additional course codes be required, schools are asked to communicate with the Department.

POST-SECONDARY CREDITS AND SENIOR YEARS - DUAL CREDITS

Senior years students may take college and university courses for Senior Years graduation credits, for example, Introduction to Psychology (university course) and Safety in the Workplace (college course). The student receives a high school credit as well as a university/college credit. Students can earn a maximum of five (5) dual credits. The decision to participate is a school, or school division decision and funding is also a local matter. Guidelines are available at http://www.edu.gov.mb.ca/ks4/policy/gradreq/choice_guidelines.html.

SCHOOL-INITIATED COURSES (SICs) AND STUDENT-INITIATED PROJECTS (SIPs)

Increasing Choice and Flexibility: Changes to Senior Years Graduation Requirements: A Status Report (June 2002) (http://www.edu.gov.mb.ca/ks4/policy/gradreq/report_forms.html) outlines the changes in the number of allowable School-Initiated Courses (SICs) and Student-Initiated Projects (SIPs) credits and provides the most current information on registration procedures. SICs increased to eleven from eight and SIPs increased to three from two. These changes have made possible more local course development to meet student need. Submissions will continue to be accepted by print, fax or e-mail, and re-registrations will also be accepted by telephone.

SPECIAL LANGUAGE CREDIT OPTION

This credit option provides for the recognition of Manitoba's linguistic diversity. Students proficient in languages other than English or French are eligible. Only one special language credit may be earned at each of the Senior Years. For further information refer to <http://www.edu.gov.mb.ca/ks4/cur/diversity/langcredits/index.html>.

SUBSTITUTION OF CREDITS IN UNUSUAL SITUATIONS

This change began in the 2001-2002 school year. School divisions/schools can choose whether or not to implement this change. A substitution of a maximum of two credits can be made in any subject area subject to parent approval. If a subject is substituted for another, for example 40S Biology instead of 40S Mathematics, the mark for 40S Biology is recorded and the school transcript would have an asterisk or a note that 40S Biology has been substituted for 40S Mathematics.

TECHNOLOGY EDUCATION

Senior Years Technology Education Program (formerly - Vocational Industrial)

The *Subject Table Handbook: Technology Education* divides the available unit-credit titles into three categories as follows:

- Heavy Industrial (H.I.) encompasses those unit-credit titles that deal with heavy trades (indentured and non-indentured), and skills that require somewhat similar tools, usually outdoor working conditions, and similar processes.
- Light Industrial (L.I.) refers to those unit-credit titles that deal with light trades and occupations (indentured and non-indentured), and skills that require similar working conditions such as an indoor environment, paper- or computer-oriented media, and finer motor skills.
- Human Services (H.S.) includes those indentured and non-indentured trades and occupations that deal with the service sector, human condition, and people-oriented skills.

Details concerning the categories of clusters are found in Appendix A.

Industrial Arts

The Senior Years curricula for Industrial Arts were originally prepared for Grades 10 to 12. The new Senior Years structure of Senior 1 to 4 (Grades 9 to 12) resulted in the re-designation of Industrial Arts 101, 201, and 301 curricula as Senior 2, 3, and 4 respectively. Half-credit versions of the Senior 1 and Senior 2 curricula have been identified for those schools wanting to provide half-credits in the optional supplementary subject areas. Senior 1 programming is derived from the existing middle years (junior high) curriculum for Grade 9. New course titles have been identified for the Industrial Arts unit-credits. Details concerning the categories of clusters are found in Appendix B.

Home Economics

Home Economics for Senior Years include curricula that were originally prepared for Grades 9 - 12. The Home Economics 9 -12 curricula are now designated Senior 1 to Senior 4 respectively. Half-credit versions of the Senior 1 and Senior 2 curricula have been identified for those schools that prefer to provide half-credits in the optional supplementary subject areas. Details concerning the categories of clusters are found in Appendix C.

Business Education and Marketing Education

For grant purposes, a series of at least eight Business Education and Marketing Education courses are selected. A marketing course grouping contains the five Marketing courses and at least three Business Education courses. Business Education and Marketing Education unit-credit titles are **not** part of the unit-credit support.

Course Groupings

The unit-credit titles are listed under course groupings. This is a method for categorizing the unit-credit titles, and may or may not place the desired unit-credit title under an "approved course group" title for which a school has received approval. Schools are invited to build their local Technology Education programming, and to have them approved by the Department, by selecting unit-credit titles from one or more of the course groupings. For example, a construction course grouping may be designed to meet apprenticeship requirements, speciality skills associated with the trade, special interest options, or special needs programming. Such a grouping may be developed by taking unit-credit titles from the following headings: Building Construction, Electricity, Refrigeration, and Air Conditioning; and/or Sheet Metal Works, and placing them within an approved course grouping title identified by the school and approved by Manitoba Education and Youth.

APPENDIX A

Technology Education - Vocational Industrial (Heavy Industrial [HI] Cluster)

Category

I	Agriculture
I	Auto Body Repair
I	Building Construction
II	Building Custodial Services
II	Building Operations and Power Engineering — Cooperative (South Winnipeg Technical Centre [SWTC] only)
I	Electricity
I	Heavy Duty Mechanics
I	Horticulture and Landscaping
I	Industrial Controls and Automation
I	Industrial Electricity
I	Industrial Maintenance Technician
I	Machine Shop
I	Metals and Aerospace Technology
I	Mineral Science
I	Plastics Technology
I	Power Mechanics
I	Refrigeration and Air Conditioning
I	Resources and Environmental Management
I	Sheet Metal Works
I	Welding

Technology Education — Vocational Industrial (Light Industrial [LI] Cluster)

Category

II	Advertising Art
I	Audio Recording Production and Performance
II	Drafting
I	Electronic Communications
I	Electronics
II	Fashion Technology and Design
I	Graphic Arts
I	Industrial Electronics
I	Jewelry Arts
I	Microcomputer Systems Technician
I	Photography
I	Production Art
I	Radio and Television Broadcasting
II	Technical Drafting (SWTC only)

Technology Education — Vocational Industrial (Human Services [HS] Cluster)

Category

I	Child Care
I	Cosmetology (Hairstyling - Nail Technician)
I	Dental Assisting
I	Dental Technology
II	Family and Community Services and Health Programs
I	Food Services
II	Health Care Assistant — CVE
II	Health Services Admissions (SWTC only)
II	Hotel Hospitality — CVE
II	Human Services
II	Pharmacy Technician — CVE

APPENDIX B

Category 1: Industrial Arts

Code	Unit-Credit Title	Course Number			
7959	Graphic Communication Technology	15G	25G		
7958	Graphic Communication Technology	10G	20G	30G 30S	40G 40S
7973	Electricity/Electronics Technology	15G	25G		
7974	Electricity/Electronics Technology	10G	20G	30G 30S	40G 40S
7965	Power Mechanics Technology	15G	25G		
7966	Power Mechanics Technology	10G	20G	30G 30S	40G 40S
7981	Metalwork Technology	15G	25G		
7980	Metalwork Technology	10G	20G	30G 30S	40G 40S
7991	Woodwork Technology	15G	25G		
7990	Woodwork Technology	10G	20G	30G 30S	40G 40S
7994	Construction Technology	40G	40S		
7995	Furniture Design Technology	40G	40S		
7996	Manufacturing Technology	40G	40S		
7997	Applied Technology (Graphics, Electronics, Power Mechanics, Metalwork, Woodwork)	40S			

Category II: Industrial Arts

7952	Drafting Design Technology	15G	25G		
7953	Drafting Design Technology	10G	20G	30G 30S	40G 40S
7997	Applied Technology (Drafting)	40S			

APPENDIX C

Category II: Home Economics

Code	Unit-Credit Title	Course Number			
1118	Family Studies	10G	20G	30G 30S	40G 40S
0485	Family Studies	15G	25G		
1109	Clothing, Housing, and Design	10G	20G	30G 30S	40G 40S
0483	Clothing, Housing, and Design	15G	25G		
1119	Food and Nutrition	10G	20G	30G 30S	40G 40S
0484	Food and Nutrition	15G	25G		
0482	Home Economics	10G	15G 25G	20G 30G	40G

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