Guide to Career and Technology Studies (CTS)

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The primary audience for this document is:

Administrators	✓
Counsellors	✓
Parents	
Students	
Teachers	✓

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UNDERSTANDING CAREER AND TECHNOLOGY STUDIES (CTS)

What Is CTS?

Career and technology studies (CTS) is a provincially authorized curriculum for Alberta secondary schools designed on a pathways model to offer flexible programming using 1-credit courses. The course structure of CTS enables schools to design unique programs that meet the needs of students and draw on community resources.

The CTS program is designed to develop skills that senior high school students can apply in their daily lives when preparing for entry into the workplace or for further learning opportunities. Through the CTS program, students are provided with opportunities to personalize their learning, identify and explore their interests, manage transitions and build partnerships while developing basic competencies, that is, the attitudes and behaviours that people need to participate and progress in today's dynamic world of work.

For more information on the Career and Technology Studies Program Philosophy and Rationale, visit the Alberta Education website at http://education.alberta.ca/teachers/program/cts/program-of-studies.aspx.

Organizational Structure

Courses

Each CTS course at the introductory, intermediate or advanced level represents approximately 25 hours of instruction. Some courses require one or more prerequisites, which are essential for maintaining safety standards, appropriate instructional sequencing and articulation with post-secondary programs.

CTS courses are instructional units defined by general and specific outcomes to develop attitudes, skills, knowledge and values supported through practical application and experience. All outcomes are part of the authorized CTS program of studies and an overall course mark of 50% or greater is required to achieve a senior high school credit. Each course is valued at 1 credit.

Critical skills for daily living and employability are incorporated through the "basic competencies" general outcome in every CTS course. These basic competencies represent what an individual needs to demonstrate to be successful in further education, the workplace and life. Career exploration is also incorporated as a general outcome in each CTS course to encourage the student to make connections between areas of interest and skill development.

Courses are organized into three levels of achievement. These levels are not indicators of grade level. Students progressing through the levels will be expected to meet higher standards and demonstrate an increasing degree of competence in both the general and specific outcomes.

Introductory level courses help students build basic skills that form the basis for further learning. Students make personal connections to the cluster (a group of CTS courses that represent occupations with broad industry commonalities) content and processes to inform possible pathway choices. These courses are 1000-level courses; e.g., FIN1010: Personal Financial Information.

Intermediate level courses build on the outcomes developed at the introductory level, providing a broader perspective while introducing students to possible life roles related to the skills and content of the cluster (a group of CTS courses that represent occupations with broad industry commonalities). These courses are 2000-level courses; e.g., HCS2020: First Aid/CPR with AED.

Advanced level courses refine expertise and help prepare students to create a transitional strategy to accommodate personal change and build personal values for entry into the workplace or a related post-secondary program. Advanced level courses may be used by students to meet the 30-level credit requirements for an Alberta High School Diploma. These courses are 3000-level courses; e.g., DES3125: Interior Design.

For more information on the CTS program of studies, including information on courses, outcomes and parameters, visit the Alberta Education website at http://education.alberta.ca/teachers/program/cts/program-of-studies.aspx.

For a detailed explanation of the structure of CTS course documents, see Appendix A: Understanding CTS Courses.

Occupational Areas

In CTS, an occupational area is a grouping of courses that focuses on the attitudes, skills, knowledge and values related to specific areas of work. There are a total of 28 occupational areas in CTS. Each occupational area is comprised of a group of courses designed to support positive career and occupational opportunities for students.

Additionally, occupational areas:

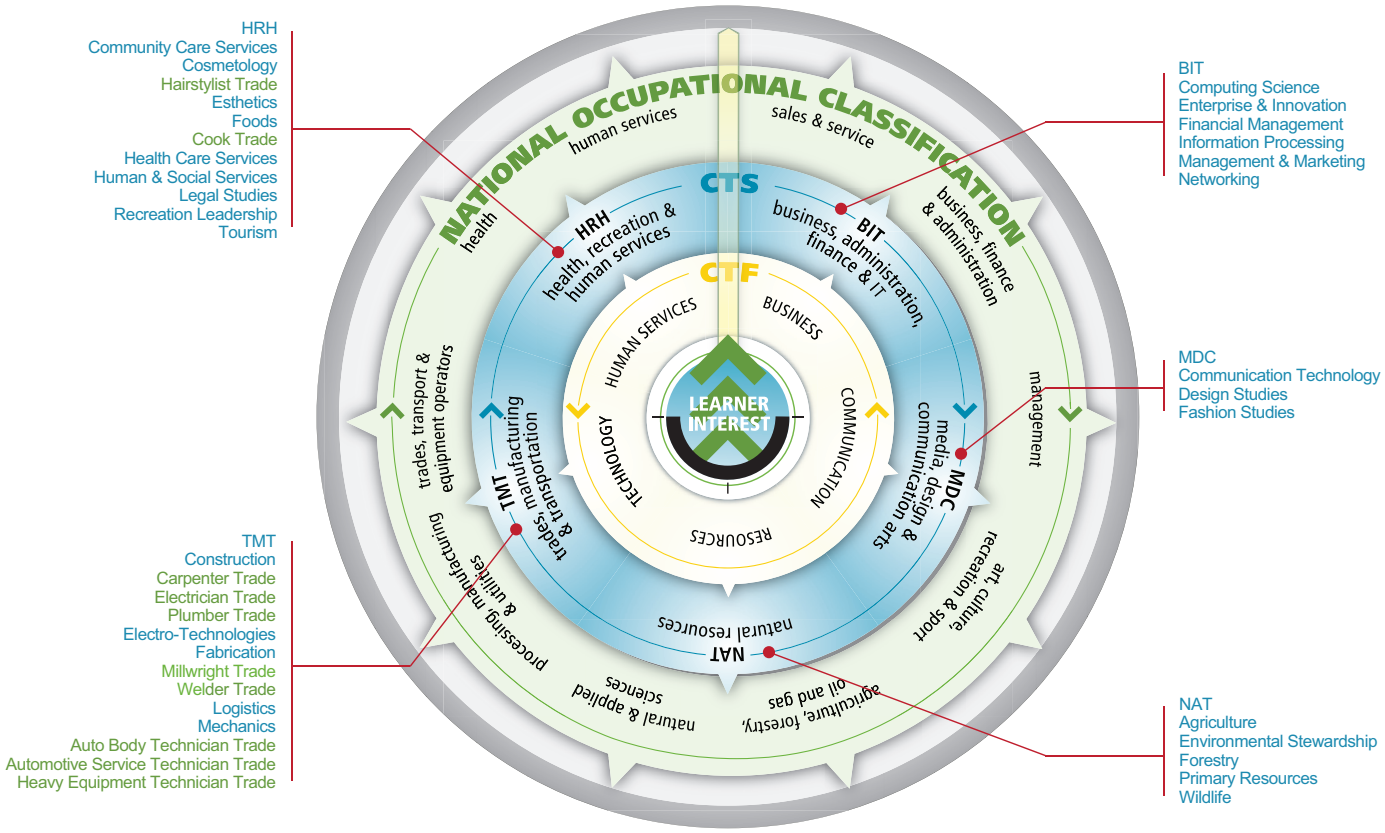
- provide a context specific to a pathway (a selection of courses providing students with opportunities to explore a career that is personally relevant)
- focus teaching and learning by relating similar knowledge, linking shared skills, guiding career exploration, allowing students to make informed career choices, associating common interests and linking education with relevant real-world experiential activities.

A **trade** represents a credentialed pathway identified by Alberta Enterprise and Advanced Education's (EAE) Apprenticeship and Industry Training where students acquire a set of skills and abilities leading to journeyperson credentials. These pathways have been validated to align with post-secondary and industry standards. Students may take these courses for senior high school credit only, or they may choose to write the external articulation examination. It is recommended that students have a minimum of 70% prior to challenging the apprenticeship external articulation. Instruction in these courses must be provided by an individual with journeyperson certification in that trade.

For more information on Apprenticeship and Industry Training, visit the Alberta Enterprise and Advanced Education website at http://eae.alberta.ca/post-secondary/apprenticeship.aspx and http://tradesecrets.alberta.ca.

For more information on the Interprovincial Standards Red Seal Program (also known as the Red Seal Program) and its value, visit http://www.red-seal.ca.

CTS Compass Identifying Clusters and their Occupational Areas



The 28 occupational areas grouped by cluster are:

Business, Administration, Finance & Information Technology (BIT)	Computing Science (CSE)	explore hardware, software and processes to write or create structured algorithms and programs that input, process and output data
	Enterprise & Innovation (ENT)	study the area of business that deals with the organization and management of a project, undertaking or innovation
	Financial Management (FIN)	plan, organize, direct, control and evaluate the operation of an accountant, auditor or financial service
	Information Processing (INF)	gather information and process it from one form into another
	Management & Marketing (MAM)	learn the processes associated with promotion for the sale of goods and services
	Networking (NET)	use a group of computers that are connected for the purpose of communication

Health, Recreation & Human Services (HRH)	Community Care Services (CCS)	experience volunteering and developing skills for community-based services in a variety of settings
	Cosmetology (COS) with Hairstylist Apprenticeship (HSA)	examine the role of personal grooming and learn the various skills involved in the hairstyling trade, such as haircutting, texturizing, colouring and styling
	Esthetics (EST)	specialize in skin care and treatments, including facials, cosmetic make-up services, hair removal, massage and nail art
	Foods (FOD) with Cook Apprenticeship (CKA)	examine the role of food, looking beyond consumption to production, visual appreciation, nutrition, meal planning, economics and preparation; learn the various skills in the cook trade
	Health Care Services (HCS)	prepare for medical careers by examining the anatomy and function of the body systems, and develop First Aid, CPR and occupational safety skills necessary for careers in emergency response
	Human & Social Services (HSS)	learn about occupations related to wellness, human development, family support, and professional standards and ethics
	Legal Studies (LGS)	become familiar with the influence, impact and complexities of the law in daily life
	Recreation Leadership (REC)	develop skills useful for coaching, fitness leadership, sport performance, athletic therapy and leading recreational activities
	Tourism (TOU)	look at the impact of tourism in Alberta and around the world and develop knowledge and skills required for the tourism industry

Media, Design & Communication Arts (MDC)	Communication Technology (COM)	discover and develop skills for relaying a message effectively using various forms of media, including animation, print, photography and audio/visual
	Design Studies (DES)	learn about the creative process from conception through to development in architecture, industrial design, engineering, interior design and landscaping
	Fashion Studies (FAS)	design, manufacture and market clothing and other textile products as well as study the history, sociology and economics of clothing and textile arts

Natural Resources (NAT)	Agriculture (AGR)	learn the how and why of producing agriculture/horticulture products, providing related services, and supporting sustainable development and the efficient use of natural resources
	Environmental Stewardship (ENS)	examine the management and conservation of the environment and propose actions that foster the sustainable development and use of resources
	Forestry (FOR)	develop an understanding of the forest as a resource and how to maintain its sustainability
	Primary Resources (PRS)	examine mineral industries and technologies that support sustainable development and efficient use of mineral resources
	Wildlife (WLD)	examine the human relationship to the natural environment and consider the impact of various human pursuits on species and ecosystems

Trades, Manufacturing & Transportation (TMT)	Construction (CON) with Carpenter Apprenticeship (CRA), Electrician Apprenticeship (ETA), Plumber Apprenticeship (PLA)	develop skills in the use of tools and materials used in construction processes and safely transform common construction materials into useful products; learn the various skills of the respective trade
	Electro-Technologies (ELT)	provide technical support and services in the design, development, testing, production, service, repair and operation of electrical and electronic equipment and systems
	Fabrication (FAB) with Welder Apprenticeship (WDA), Millwright Apprenticeship (MWA)	develop skills in the use of tools and materials used in fabrication processes and safely transform common metals into useful products; learn the various skills of the welder trade
	Logistics (LOG)	organize and coordinate the movement of people, materials and data
	Mechanics (MEC) with Automotive Service Technician Apprenticeship (ASA), Auto Body Technician Apprenticeship (ABA), Heavy Equipment Technician Apprenticeship (HEA)	inspect, diagnose, repair and service mechanical, electrical and electronic systems, and components of cars and light and commercial transport trucks; learn the various skills of the auto service technician trade

Career Transitions (CTR)	Career Transitions (CTR) courses help students prepare for the transition from school to the workplace. Students learn to see themselves as agents of change, innovators and leaders working toward their future goals.

Clusters

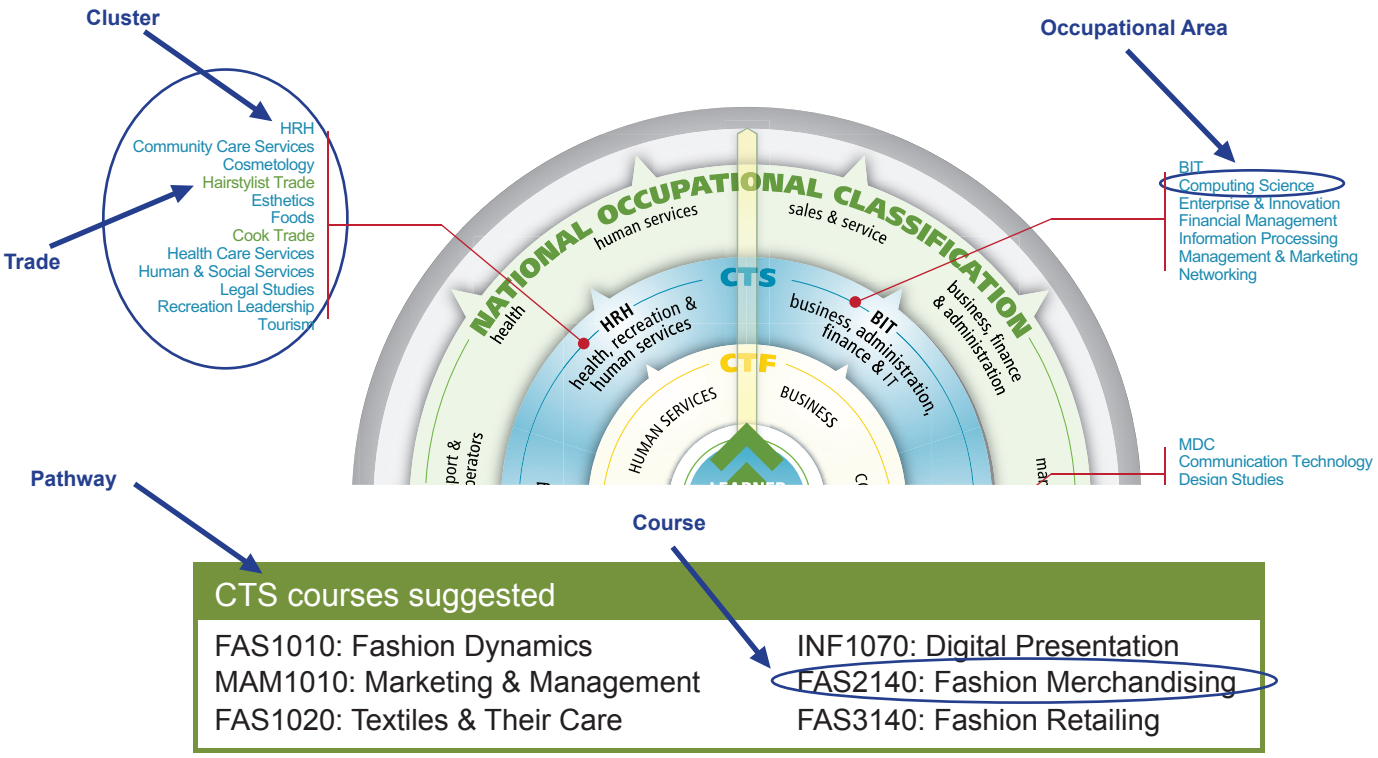
The CTS program is divided into clusters to provide students, teachers and administrators with opportunities to create pathways in which students can sample courses of interest or use courses to create focused pathways that lead to specialized skills, external credentials or further education.

A cluster is a group of CTS courses within an occupational area that represents broad industry commonalities. Clusters in CTS are aligned with the National Occupational Classification (NOC) and function as an organizing tool for the CTS program.

For more information on the NOC, visit the Human Resources and Skills Development Canada website at http://www5.hrsdc.gc.ca/noc/english/noc/2011/welcome.aspx.

Each cluster is comprised of occupational areas that include related 1-credit courses. Clusters connect learning outcomes specific to the knowledge, skills and attitudes required for related occupational areas. Clusters are designed to:

- help students choose curriculum and occupational fields for which they have interest and aptitude
- provide a context for selecting courses specific to a pathway
- help connect students with exploratory courses of study, allowing students to gain general, transferable skills
- help students develop specialized skills and knowledge through pathways
- focus teaching and learning by relating similar knowledge, linking shared skills, guiding career exploration, allowing students to make informed career choices, associating common interests and linking education with relevant real-world authentic learning experiences.



The five clusters in CTS are:

Business, Administration, Finance & Information Technology – BIT
BIT focuses on the management, marketing and use of electronic technologies to access, use and manipulate information within personal, family, workplace, community and global contexts. This cluster challenges students to expand their confidence, experience and skills as innovators and leaders.

Health, Recreation & Human Services – HRH
HRH focuses on a vast array of challenging and rewarding careers in health care, community supports, recreation, cosmetology, food services, tourism and law.

Some courses within the Human & Social Services (HSS) and Health Care Services (HCS) occupational areas of this cluster contain sensitive content. Refer to the *Guide to Education: ECS to Grade 12* on Alberta Education's website at http://education.alberta.ca/admin/resources/guidetoed.aspx for more information on section 11.1 of the *Alberta Human Rights Act*.

Media, Design & Communication Arts – MDC
MDC provides students with the flexibility to adapt to various situations relating to design, communication and fashion. This cluster includes courses related to art and culture, such as the performing arts, film and video, broadcasting, journalism, writing, creative design, fashion, libraries and museums.

Natural Resources – NAT
NAT focuses on conservation and the sustainable use of natural resources. Students develop the motivation and commitment to work individually and collectively as private citizens and members of the workforce toward the conservation and responsible use of air, energy, forests, land, minerals, water and wildlife.

Trades, Manufacturing & Transportation – TMT
TMT focuses on skills and knowledge related to the design, construction, fabrication and maintenance of a product. This cluster includes courses that relate to manufacturing, processing, utilities, construction, mechanics, fabrication, trades supervision, trades contracting, logistics, transportation and heavy equipment.

Pathways

A **pathway** is a selection of courses providing students with opportunities to explore and acquire the attitudes, skills, knowledge and values for a potential career. Students develop skills and gain knowledge in an organized and progressive way as they work toward goals that may include university, college, apprentice training or moving directly into the workforce. Teachers and students can select and combine CTS courses to create pathways for exploration, specialization and credentialing.

A **specialized skill pathway** is a collection of courses selected to address student interest in a field of study; e.g., Event Planner, Outdoor Guide, Court Clerk.

Examples of specialized skill pathways are available on the Alberta Education website at http://education.alberta.ca/teachers/program/cts/resources/pathways.aspx.

For more information on specialized skill pathways leading to Skills Canada Alberta competitions, visit the Alberta Education website at http://education.alberta.ca/teachers/program/cts/resources/pathways.aspx.

For more information on Skills Canada Alberta, visit the Skills Canada Alberta website at http://skillsalberta.com.

A **credentialed pathway** is a series of specific courses selected to provide opportunities for students to achieve a credential or credit awarded by a recognized community or industry organization or post-secondary institution; e.g., Welder, A+ Certification Computer Repair Technician.

All credential/journeyperson opportunities are external to Alberta Education, and it is the joint responsibility of the student/teacher/school to ensure that the requirements of the credentialing organization have been addressed.

Currently, there are 10 apprenticeship pathways available for students:
- Auto Body Technician
- Automotive Service Technician
- Carpenter
- Cook
- Electrician
- Hairstylist
- Heavy Equipment Technician
- Millwright
- Plumber
- Welder

For more information on credentialed pathways, visit the Alberta Education website at http://education.alberta.ca/teachers/program/cts/resources/pathways.aspx.

For students pursuing courses outside of the regular school environment, the revised *Off-campus Education Handbook* provides guidance for school authorities to offer off-campus education programming for their students and covers work-related activities that take place outside the school classroom environment. The revised *Off-campus Education Handbook* represents updates to legislation regarding workplace health and safety and incorporates recommendations to support a meaningful and safe educational experience for students.

For more information on alternate program delivery, see Appendix E: Alternative Delivery Strategies for CTS.

For more information on the *Off-campus Education Handbook*, visit the Alberta Education website at http://education.alberta.ca/teachers/program/off-campus.aspx.

DESIGNING AND IMPLEMENTING CTS PROGRAMS

CTS Program and Pathway Planning for Administrators

School Authority Priorities

School administrators determine which CTS clusters or occupational area(s) are made available to students by reviewing school authority priorities and community needs. Considerations for planning priorities may include the following.

Infrastructure

Some CTS courses can be delivered in classrooms, while others require the use of more specialized facilities; e.g., commercial kitchens, automotive labs, computer labs. Schools are encouraged to use on- and off-campus learning environments in addressing student needs while ensuring the safe and effective delivery of CTS courses. CTS learning environments, whether on- or off-campus, must adhere the policies and guidelines for facilities, equipment and safety as defined in the CTS course parameters.

Instructional Human Resource Capacity

A key factor in the effective delivery of CTS courses is the involvement of qualified and enthusiastic teachers. While CTS courses can be delivered by certificated teachers having expertise and interests suited to providing instruction in CTS settings, certain CTS courses require instructor qualifications in addition to a professional teaching certificate. Individuals who perform hazardous work must have adequate qualifications, training and experience.

CTS teacher qualification and selection processes must address the instructional qualifications as defined in the occupational area and/or course parameters. When a certificated teacher with the required credentials is not available to teach a CTS course, school authorities may choose to employ a non-certificated instructor. It is the responsibility of the school authority to ensure that the requirements for supervision of non-certificated instructors are met.

For more information on human resources, see Appendix B: Human Resources.

Post-secondary Institutions, Community Organizations and Business Partnerships

Community support and involvement in the delivery of CTS courses and pathways are significant in providing flexibility for program delivery that meets local needs. School authorities are encouraged to access the available resources within their community. Partnerships developed with post-secondary institutions, community organizations and/or businesses establish links to the community, support sustainable programs, and provide students and schools with learning opportunities.

Resources

High-quality resources are critical to the successful implementation and delivery of CTS courses and pathways.

For more information on resources, see Appendix C: Resources.

Equipment

Equipment and machinery has been identified as one of the largest cost considerations for CTS courses.

Developing CTS facilities is a collaborative process involving the teachers, administrators, students and community. Decisions regarding facilities and equipment are made on the basis of student need, knowledge of the CTS program of studies and further post-secondary education and workplace opportunities.

School Timetabling and Scheduling

Schools may choose to maximize options for the delivery of CTS courses by modifying current class scheduling practices, creating a school authority schedule or timetable, and/or combining methods of delivery.

For more information on timetabling and scheduling, see Appendix D: Timetabling and Scheduling for CTS Courses.

Alternative Program and Pathway Delivery Strategies

Schools are encouraged to consider the many methods of course delivery available to them when they plan CTS course offerings. While most CTS courses can be offered through standard class scheduling practices, the structure of CTS, with its focus on outcomes and the use of off-campus delivery and enhanced distance learning tools, enables schools to expand student access to CTS courses.

For more information on alternative delivery strategies, see Appendix E: Alternative Delivery Strategies for CTS.

CTS Funding

Basic instructional funding for senior high schools is based on the credit enrollment unit (CEU) and is allocated according to the following criteria:

- full CEU funding is provided for successfully completed courses (passed with minimum grade of 50 percent)
- 20 percent of CEU funding is provided for successfully challenged courses
- CTS CEU funding is provided to school authorities in three tiers determined by occupational area.

For more information on CTS funding, view the *Funding Manual for School Authorities* on the Alberta Education website at http://education.alberta.ca/admin/funding/manual.aspx.

Note: Until September 2015 when the new optional Career and Technology Foundations curriculum for grades 5 to 9 is scheduled for implementation, schools offering Career and Technology Studies (CTS) as one of their provincially authorized optional courses can continue to use Introductory level courses from the CTS senior high school program of studies.

Requirements for Placement and Supervision of Students for Work Study, Work Experience, Practicum and Off-campus Activities

The practical application of the attitudes, skills, knowledge and values developed in CTS courses may require students to participate in organized and supervised work study, work experience, practicum and/or off-campus activities. Refer to the *Off-campus Education Handbook*.

For more information on supervision and placement of students, view the *Off-campus Education Handbook* on the Alberta Education website at http://education.alberta.ca/teachers/program/off-campus.aspx.

Health and Safety for CTS Classrooms and Students

Safety programs and practices in place within schools must support the implementation of CTS, as well as other school programs. It is critical that school authorities identify key issues and comply with legislation related to health and safety in CTS learning environments.

For more information on safety, see Appendix F: Health and Safety in CTS and visit the Alberta Human Services website at http://humanservices.alberta.ca/SFW/307.html.

Communication

School administrators are encouraged to design a communication plan to inform all client and stakeholder groups about the goals and structure of the CTS program offered by their school. The communication plan should include an initial orientation to CTS and ongoing strategies to reinforce and expand understanding of the CTS program and how it is evolving in the school and community. To assist in this task, information packages may be developed and modified to address the needs of different groups.

CTS promotional materials are available on the Alberta Education website at http://education.alberta.ca/teachers/program/cts/news.aspx and http://education.alberta.ca/teachers/program/cts/resources.aspx.

CTS Program and Pathway Planning for Teachers

Considerations for CTS Program and Pathway Planning

While schools are encouraged to consider flexible methods of planning and delivering CTS courses that best meet the needs of students, care is needed when planning to ensure that:

- all the prerequisites and parameters of CTS courses are followed
- all the general and specific outcomes of CTS courses are delivered and assessed
- the student's right to access a minimum of 25 hours of instruction per course is observed
- credits are not awarded twice for the same learning
- students are apprised of their registration in CTS courses and that their right to choose CTS courses is maintained
- teachers who provide or supervise the instruction have the appropriate certification and are knowledgeable about the CTS course
- there are designated times when teachers are available to students
- students know, prior to enrolling in CTS courses, how and when they will be able to access the instructional expertise of teachers.

Involving Students in Pathway Planning

CTS pathways are designed at the school and/or school authority level by combining 1-credit CTS courses into pathways that best suit the needs of the students, school, school authority and community. Schools determine which CTS courses and pathways to make available to students, the extent to which students are involved in planning their own CTS pathways and whether courses will be teacher-directed or student-managed using multi-activity learning. CTS pathway and program design and CTS course selection must address prerequisites and other delivery requirements defined in the CTS course parameters.

Teachers and counsellors should provide students with guidance and support during their individual pathway planning process. The CTS Pathway Planner, available on the Alberta Education website at http://education.alberta.ca/teachers/program/cts/resources/pathways.aspx, can help organize student pathway planning and provide a record for regular reflection and revision.

Teachers plan for instruction to ensure that students meet all the learner outcomes defined in the program of studies by the end of the school year. In CTS, planning for instruction is focused on CTS course selections that lead to a student's pathway of choice and deliberate planning to ensure that all learner outcomes for each course are met.

For more information about planning for instruction, refer to the *Guide to Education: ECS to Grade 12* at http://education.alberta.ca/admin/resources/guidetoed.aspx.

For more information on career planning, see Appendix G: Career Planning with Students.

CTS Prerequisites

Prerequisite courses have been identified as essential to build on further learning in a specific area, to cover content required for an external credential and/or for safety reasons. Students will benefit from the learning covered in prerequisite courses and every effort should be made to ensure students acquire the necessary prerequisites as specified for their CTS programming.

To support the transition from existing CTS courses to new and revised CTS courses, documents entitled "from Existing to New" are available for each cluster to indicate course correlations. Where applicable, current prerequisite courses will be aligned with new courses and accepted as prerequisites (as indicated).

Alternative delivery strategies may include concurrent delivery of CTS courses over the course of a term or semester. Teachers must ensure that all outcomes for prerequisite courses are successfully completed by the end of the term or semester.

To review the "from Existing to New" documents, visit the Alberta Education website at http://education.alberta.ca/teachers/program/cts/program-of-studies.aspx.

A CTS course prerequisite may be waived by the school principal when a student can demonstrate competency in prerequisite CTS course outcomes, attitudes, skills, knowledge and values. Funding will not be provided for a CTS course if the prerequisite(s) was not completed and/or waived in the same term or a prior term.

For more information on waiving prerequisite courses for CTS, refer to the *Guide to Education: ECS to Grade 12* at http://education.alberta.ca/admin/resources/guidetoed.aspx.

Course Challenges in CTS

Course challenge is a provision that allows a senior high school student to challenge, for credit, the outcomes of a CTS course. This may be appropriate for a student who, as a result of prior learning, can demonstrate the ability to meet the assessment standards established for specific 1-credit CTS courses. Course assessment may occur through:

- a traditional comprehensive examination
- teacher observation over several classes
- teacher evaluation of a student's portfolio or work sample
- student demonstration of skills through the performance of set tasks
- external credentialing that acknowledges successful completion of course outcomes.

For more information on challenge courses for CTS, refer to the *Guide to Education: ECS to Grade 12* at http://education.alberta.ca/admin/resources/guidetoed.aspx.

Project Courses

A CTS project course provides students with an opportunity to develop project design and management skills to extend and enhance competencies and skills gained in other CTS courses through contexts that are personally relevant. There are five CTS project courses available in each occupational area: one introductory project course, two intermediate project courses and two advanced project courses. Additionally, CTS project courses:

- must connect with a minimum of two successfully completed CTS courses, one of which must be at the same level and be in the same occupational area as the CTS project
  - at the **Introductory** level, the other CTS course(s) can be either at the same level or at the intermediate level from any occupational area
  - at the **Intermediate** level, the other CTS course(s) can be at any level from any occupational area
  - at the **Advanced** level, the other CTS course(s) can be either at the same level or at the intermediate level from any occupational area
- may not be delivered as stand-alone courses
- may not be combined with core courses or connected to other CTS project courses or CTS practicum courses
- must include a course outline or student proposal for projects and/or performances that are teacher-led or student-led.

For more information about project courses, see Appendix H: CTS Project Course FAQs, Appendix I: CTS Introductory Project Course Template, Appendix J: CTS Intermediate Project Course Template and Appendix K: CTS Advanced Project Course Template.

Practicum Courses

A CTS practicum course enables students to apply prior learning and demonstrate the attitudes, skills, knowledge and values required by an external organization to achieve a credential, articulation or credit. There are two CTS practicum courses available in each occupational area: one intermediate practicum course and one advanced practicum course. CTS practicum courses:

- may be delivered on- or off-campus
- may be accessed by students continuing to work toward attaining a recognized credential, articulation or credit awarded by an external organization
- must be connected to at least one successfully completed CTS course from the same occupational area
- cannot be delivered as a stand-alone course or combined with a CTS project course
- cannot be used in conjunction with the Registered Apprenticeship Program or the Green Certificate Program
- cannot, at the intermediate level, be used in conjunction with any advanced (3000-) level course
- cannot, at the advanced level, be used in conjunction with any introductory (1000-) level course.

For more information about practicum courses, see Appendix L: CTS Intermediate Practicum Template and Appendix M: CTS Advanced Practicum Template.

Students Enrolled in Knowledge and Employability (K&E) and CTS

K&E occupational courses are designed for students who need unique learning support systems; e.g., hands-on learning experiences and remediation in language arts, mathematics, science and social studies.

In general, the K&E learning environment may be characterized by:

- smaller class sizes, allowing teachers to provide students with individual assistance in building self-esteem and developing specific competencies
- hands-on learning, with minimal reference to occupation-related theory
- the recognition of students' ability to demonstrate practical skills necessary for success in the specified occupational area
- the awarding of grades based on generic skills development, rather than for the equivalent career-specific competencies in CTS courses.

Both the K&E occupational courses and the CTS program are designed to:

- involve students in hands-on learning experiences
- assist students in the development of occupational competencies within a career-related context that will assist them in their transition into the workplace
- provide opportunities for students to explore a variety of career pathways.

For more information about K&E, see *Knowledge and Employability – Career and Technology Studies (CTS) CONNECTIONS* at http://education.alberta.ca/teachers/program/know/resources.aspx.

Managing a CTS Facility

During the School Year

Each school requires protocols related to the management of a CTS facility. It is important for the CTS teacher to clarify these protocols with the school administration. Some areas to discuss may include:

- safety
- budget and management of supplies
- inventory management
- facility and equipment management.

Preparing for Summer Break

In order to prepare a CTS facility for the summer break, the CTS teacher must adhere to school authority policies and practices that may include the following:

- Leave tools, supplies and facility in the best possible condition; e.g., repair tools, if possible, or send to maintenance, sharpen tools, loosen belts, unplug small equipment and power tools, secure all equipment.
- Dispose of perishable products and correctly store supplies.
- Turn off compressed air and electrical power and lock the CTS facility power panel, where possible.
- Empty, clean and unplug refrigerators and freezers; turn off their power supplies and leave the doors open.
- Ensure that an inventory of equipment takes place for the classroom/facility and kept with the appropriate school personnel.

Record Keeping

CTS prerequisite courses must be tracked by designated school personnel during CTS pathway planning to ensure that:

- students have the required competencies included in prerequisite CTS courses
- schools receive CEU funding for delivered CTS courses.

Teachers are required to provide evidence of learning by tracking various assessment results (formative and summative) and submit a final mark for each CTS course. Like all Alberta programs of study, an overall course mark of 50 percent is required to achieve credit.

It is the responsibility of the school administration to manage and store records of student course completion for **seven** years. In particular, it is recommended that the CTS project and CTS practicum templates be completed and stored by the school for each student accessing CTS project and CTS practicum courses. These records provide evidence that all of the CTS project and CTS practicum course parameters were met.

GLOSSARY

Advanced: describes CTS courses numbered with an identifier in the 3000 range that refine expertise and help prepare students to create a transitional strategy to accommodate personal change and build personal values for entry into the workplace or a related post-secondary program. Advanced level courses may be used by students to meet the 30-level credit requirements for an Alberta High School Diploma.

Advanced standing: post-secondary credit awarded to students for successful completion of a senior high school course that has been determined to be comparable to a post-secondary course.

Apprenticeship: post-secondary education in which a student (apprentice) learns the practical and technical aspects of a trade through a combination of on-the-job training and work experience (80% of learning) and technical training (20% of learning).

Articulation: the matching or correlating of a senior high school course outcomes to post-secondary course outcomes.

Basic competencies: sometimes referred to as transferable, essential or soft skills, basic competencies are standards of performance, including managing learning, managing resources, problem solving and innovation, communicating effectively, working with others and demonstrating responsibility.

BIT: Business, Administration, Finance & Information Technology CTS cluster acronym.

Career: encompasses many life roles, including activities related to a person's job or occupation and personal life in both local and global contexts as a family member, friend, community volunteer and citizen of the world.

Career and Technology Studies (CTS): a program of studies based on occupational areas aligned with the National Occupational Classification. Senior high school students explore attitudes, skills, knowledge and values they can apply in daily living, investigate career options, make effective career choices, and prepare for entry into the workplace or further learning by gaining specialized knowledge and skills and/or external credentials.

Cluster: a group of CTS courses that represent occupations with broad industry commonalities. The CTS clusters align with the National Occupational Classification and function as an organizational tool for the CTS program.

Competent: the qualifications, training and experience to do a specific job to an established standard of performance.

Course: an introductory, intermediate or advanced level competency-based instructional unit that requires 25 hours to complete.

Credential: refers to written evidence provided by an external, recognized organization (community or industry organization or post-secondary institution) of a student's completion and qualifications with respect to particular competencies and outcomes.

Credentialed pathway: a series of specific courses selected to provide opportunities for students to achieve a credential or credit awarded by a recognized community or industry organization or post-secondary institution; e.g., Welder, A+ Certification Computer Repair Technician.

CTS: Career and Technology Studies acronym.

Distributed learning: is a model that offers a variety of delivery formats and mediums—print, digital (online) and traditional delivery methods for teaching and learning. Distributed learning materials are available for purchase from the Learning Resources Centre (http://www.lrc.education.gov.ab.ca) and for download at LearnAlberta.ca (http://learnalberta.ca).

Dual credit: is where senior high school students participate in apprenticeship training or post-secondary, college or university courses earning both senior high school and post-secondary credits for the same course.

Due diligence: deliberate and constant attention that everything reasonably possible is being done to ensure the health and safety of the students, teachers and environment. Due diligence is demonstrated by developing safety plans to meet legislative requirements.

General outcomes: are statements describing the attitudes, skills, knowledge and values that students are required to address in the completion of a CTS course.

HRH: Health, Recreation & Human Services CTS cluster acronym.

Intermediate: describes CTS courses numbered with an identifier in the 2000 range that build on the outcomes developed at the introductory level, providing a broader perspective while introducing students to possible life roles related to the skills and content of the cluster.

Introductory: describes CTS courses numbered with an identifier in the 1000 range that help students build basic skills that form the basis for further learning. Students make personal connections to the cluster content and processes to inform possible pathway choices.

K&E: Knowledge and Employability acronym.

Knowledge and Employability: courses designed for individual academic subject areas and occupations for grades 8 to 12. These courses are intended for students who learn best through experiences that integrate essential and employability skills in occupational contexts and provide students with opportunities to enter into employment or continue their education.

MDC: Media, Design & Communication Arts CTS cluster acronym.

NAT: Natural Resources CTS cluster acronym.

NOC: National Occupational Classification acronym.

Non-certificated instructors: instructors with the necessary credentials and expertise to deliver instruction, as defined by course parameters and content, but who do not hold a valid teaching certificate.

Occupational area: a grouping of courses that focuses on the attitudes, skills, knowledge and values related to specific areas of work.

Off-campus: experiential method of learning that integrates a student's classroom studies with recognized on-the-job work experiences.

OHS: Occupational Health and Safety acronym.

On-campus: learning in a school-based facility.

Outcomes: the attitudes, skills, knowledge and values to be developed in each CTS course.

Parameters: describe key features of the CTS learning environment that need to be in place to support effective learning; e.g., student access to possible external credentials, safety considerations, facilities, equipment, instructional qualifications.

Pathway: a selection of courses providing students with opportunities to explore and acquire the attitudes, skills, knowledge and values for a career that is personally relevant.

Prerequisites: CTS courses providing essential attitudes, skills, knowledge and values for further learning or for safety reasons.

RAP: Registered Apprenticeship Program acronym.

Reasonably practical: recognizes that workers cannot be protected from hazards that have yet to be identified.

Regional skills centre: a community-based learning centre established and maintained by a partnership council of multiple school authorities, post-secondary institutions and/or business and industry to meet the unique needs of a regional community.

Registered Apprenticeship Program: program designed for senior high school students who wish to begin a trade apprenticeship while completing their Alberta High School Diploma. A RAP apprentice accumulates hours of on-the-job training as credit toward both a journeyman certificate and an Alberta High School Diploma. RAP 15, 25 and 35 courses are taught through off-campus learning under the joint supervision of a certificated teacher and a journeyperson in the workplace.

Skills centre: a complementary learning centre established and maintained by a single school authority with possible partnerships with post-secondary institutions and/or business and industry.

Specialized skill pathway: a collection of courses selected and combined by students and teachers to address student interests, employment, further education and school or community needs.

Specific outcomes: supporting statements detailing particular attitudes, skills, knowledge and values required to fulfill an individual general outcome in a CTS course.

Trade: exists within an occupational area and represents a credentialed pathway determined by Alberta Enterprise and Advanced Education, Apprenticeship and Industry Training, where students acquire a set of skills and abilities leading to journeyperson credentials.

TMT: Trades, Manufacturing & Transportation CTS cluster acronym.

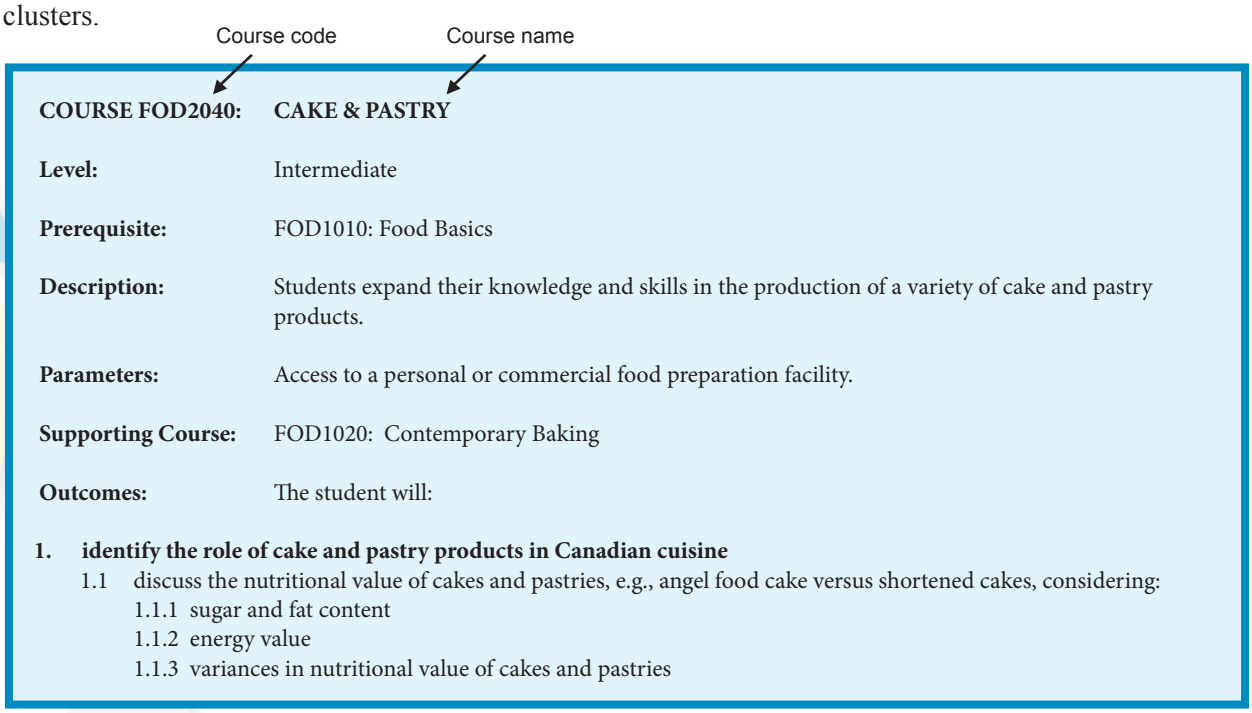
WCA: *Workers' Compensation Act* acronym.

WCB: Workers' Compensation Board acronym.

APPENDIX A: UNDERSTANDING CTS COURSES

Sample CTS Course

The CTS program of studies is a legal document that outlines mandatory requirements for CTS courses in all clusters.



Course Code: alphanumeric code with a three-letter prefix identifying the occupational area followed by a four-digit course number (first digit indicates course level; i.e., 1 = introductory, 2 = intermediate, 3 = advanced).

Level: introductory, intermediate or advanced.

Prerequisite: CTS course(s), if applicable, that students are required to have successfully completed prior to attempting this CTS course. The CTS Prerequisite Lookup tool, located on each CTS cluster web page, assists teachers and counsellors in identifying the necessary prerequisites.

Description: a brief overview of the content of the course.

Parameters: required considerations for delivery of CTS course outcomes.

Supporting Courses: additional CTS courses that support the learning outcomes of the CTS course. These are **not** prerequisites.

Outcomes: General outcomes are presented in **boldface**, and the specific outcomes follow immediately in lightface. All general and specific outcomes must be delivered and assessed by the teacher, but emphasis and weighting placed on individual outcomes is determined by the teacher with consideration for the focus and direction of the CTS pathway.

APPENDIX B: HUMAN RESOURCES

Who Can Teach CTS?

Teacher selection processes must address the instructional qualifications as defined in the CTS occupational area and CTS course parameters. In some instances, the instructional qualifications are a requirement for course delivery, such as when learning involves a high risk to student health and safety. In other instances, they are recommended for specific circumstances such as when providing customer services or in qualifying students to obtain a credential. These qualifications may include:

- a specific credential granted by business, industry, government or a community organization; e.g., journeyman certificate, First Aid certificate
- evidence of successful completion of a specialized training program or equivalent; e.g., a workshop/course from a technical institute, college or university.

Schools may find it desirable to expand human resources available for the delivery of CTS by:

- providing effective teacher orientation and in-service
- encouraging collaboration and teamwork
- involving teachers from other core/optional subject areas
- involving credentialed instructors, instructional assistants, community partners, etc. with specialized knowledge and skills
- establishing partnerships with post-secondary institutions.

Specific Instructor Qualification Information

The "Parameters" section of CTS courses provides a description of the instructor qualifications required by external credentialing organizations and additional CTS course requirements. When instructor qualifications, and all other parameter requirements have been met, students may challenge credentials.

APPENDIX C: RESOURCES

Authorized Learning Resources

A database of all authorized learning and teaching resources for use in each occupational area is available on the Alberta Education website at http://education.alberta.ca/apps/lrdb. The database is searchable for each 1-credit CTS course and provides a variety of resources that support learning and teaching in CTS. These include:

- authorized resources; i.e., student basic, student support, teaching
- provincial software licensing agreements
- additional sources of support.

CTS Learning and Teaching Resource Review Centres

The CTS Learning and Teaching Resource Centres are established in partnership with school authorities to access teacher expertise and build capacity for resource implementation support across the province. The centres endeavour to provide a complete collection of print, digital and online resources for all of the CTS courses. Instructional staff is able to review resources onsite or sign them out.

Southern Alberta
Career and Technology Centre
Calgary Board of Education
Lord Shaughnessy Site
2336 – 53 Avenue SW
Calgary, Alberta
Telephone: 403–243–4500

Central/Northern Alberta
Red Deer College
100 College Boulevard
Red Deer, Alberta
Telephone: 403–342–3344

Resource Authorization Categories

Teachers are encouraged to select resources that meet the diverse learning needs of students they teach. The resource authorization categories are student basic, student support or teaching.

Student Basic resources are high quality learning resources intended for students. These resources best meet the evaluation criteria and address the majority of general and specific outcomes of a course(s), substantial components of a course(s) or general outcomes as outlined in provincial programs of study.

Student Support resources are high quality learning resources intended for students. These resources best meet the evaluation criteria and address some of the general or specific outcomes of a course(s) or components of a course(s), or address the general or specific outcomes as outlined in the provincial programs of study.

Teaching resources are high quality resources intended for teachers. These resources best meet the evaluation criteria and support the implementation of courses or programs of study, or educational initiatives, and the attainment of the goals of education.

Note: Alberta Education strongly recommends that teachers read all selections in the student resources and all activities in the teacher guides prior to using them with students. Careful consideration should be given to the sensitivities of both the student audience and the community and to the reading levels of students.

The Learning Resources Centre (LRC), available at http://www.lrc.education.gov.ab.ca, is the source for accessible, available and affordable authorized resources to enhance learning for all Alberta students.

Connection: Information for Teachers, available at http://education.alberta.ca/teachers/resources/connection.aspx, is an online information newsletter for administrators, counsellors and teachers. It includes information on programs of study, resources, assessment, technology, new initiatives and projects.

LearnAlberta.ca, available at http://learnalberta.ca, is an online resource designed to assist Kindergarten to Grade 12 teachers in Alberta to locate and use digital learning and teaching resources produced by Alberta Education. Schools across Alberta have access codes for this site. The revised LearnAlberta.ca website allows teachers to locate resources by grade, subject or topic from within the context of the programs of study. Teachers can sign up for access on LearnAlberta.ca to create lists of favourite resources, add links to other web resources, and annotate, sequence and publish those lists for sharing with colleagues and students.

Tools4Teachers is a tab on the LearnAlberta.ca website, available at http://learnalberta.ca, that provides multimedia segments and digital versions of print-based resources, including teacher resources, assignments and answer keys. As well, this section of the site provides some online courses. These online courses can be used as complete courses or classroom teachers are encouraged to access these resources for development of their own classroom instruction. All digital resources can be used by Alberta educators in the development of their own lessons, print or digital, and/or in preparing for upcoming courses. Teachers must register with LearnAlberta.ca in order to log in.

Online Resources

Alberta Apprenticeship and Industry Training
- Tradesecrets (http://tradesecrets.alberta.ca)

Alberta Education
- Authorized Resources Database (http://education.alberta.ca/apps/lrdb)
- *Guide to Education: ECS to Grade 12* (http://education.alberta.ca/admin/resources/guidetoed.aspx)
- Off-campus Education (http://education.alberta.ca/teachers/program/off-campus.aspx)

Alberta Enterprise and Advanced Education
- Students and Apprentices (http://eae.alberta.ca/planning.aspx)

Alberta Human Services
- Employment Standards (http://humanservices.alberta.ca/SFW/1224.html)
- Young Workers (http://humanservices.alberta.ca/SFW/5369.html)
- Occupational Health and Safety Legislation (http://humanservices.alberta.ca/SFW/295.html)
- Occupational Health and Safety Magazine (http://humanservices.alberta.ca/SFW/126.html)
- Occupational Health and Safety Publications (http://humanservices.alberta.ca/SFW/12616.html)
- Work Safe Alberta (http://humanservices.alberta.ca/SFW/274.html)

Alberta Learning Information Service
- (http://alis.alberta.ca)

Alberta Teachers' Association CTS Council
- (http://ctscouncil.com)

APPENDIX D: TIMETABLING AND SCHEDULING FOR CTS COURSES

Standard Class Scheduling

Standard class scheduling involves timetabling CTS classes using the Carnegie Unit organizational model; i.e., a time-credit relationship. Such practices, usually established at the school level through various software programs, provide for instruction through clearly defined time blocks. Standard class scheduling can be effectively used to timetable CTS classes (student has access to a minimum of 25 hours of instruction per course), assign students and teachers, and monitor attendance.

Using typical timetabling practices, schools may decide to:

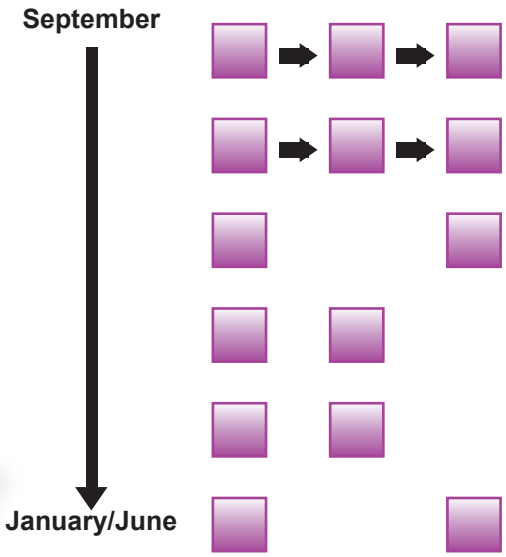
- schedule time blocks when students select from a menu of courses
- schedule a specific CTS course within an instructional time block
- schedule multilevel courses concurrently within an instructional time block
- cycle particular courses over semesters or school years.

CTS emphasizes experiential learning. It is important that students have opportunities to demonstrate and practise the competencies they develop. Class length should provide sufficient time for hands-on experiences as well as work set-up and clean-up. Class sequencing should provide frequent opportunities for students to practise the skills they are learning.

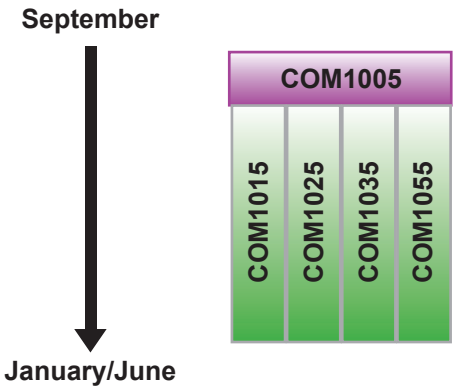
The following scenarios represent some possible ways of organizing for instruction within standard time blocks.

Scenario A

From a list of courses provided by the teacher, students select which ones they will work on and, in consultation with the teacher, establish timelines for completion and submission of assignments.



Scenario B
All students work on one or more courses together, then are able to select from a list of courses that are available for individual or small group learning. The menu of courses could be from one or more occupational areas.

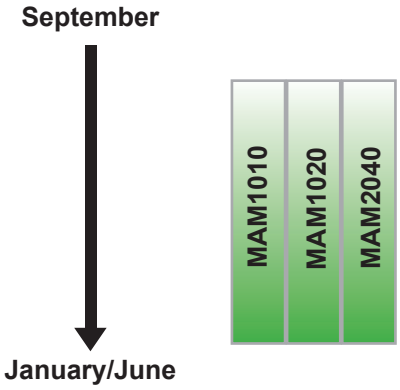


Scenario C
Students work on three courses within an instructional time block. This strategy is often used when students are working on an integrated project, such as operating a school store or handling customer work; e.g.,

MAM1010: Marketing & Management

MAM1020: Quality Customer Service

MAM2040: Retail Operations

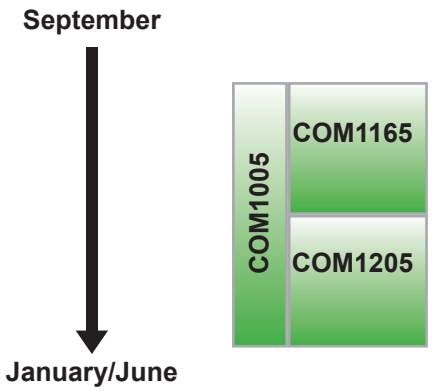


Scenario D
Students work on one course throughout the year/semester (e.g., 20 minutes per class or one class per week) and then spend the remainder of the class time working on other courses; e.g.,

COM1005: Visual Composition (throughout the term)

COM1165: Printing 1

COM1205: Photography – Introduction



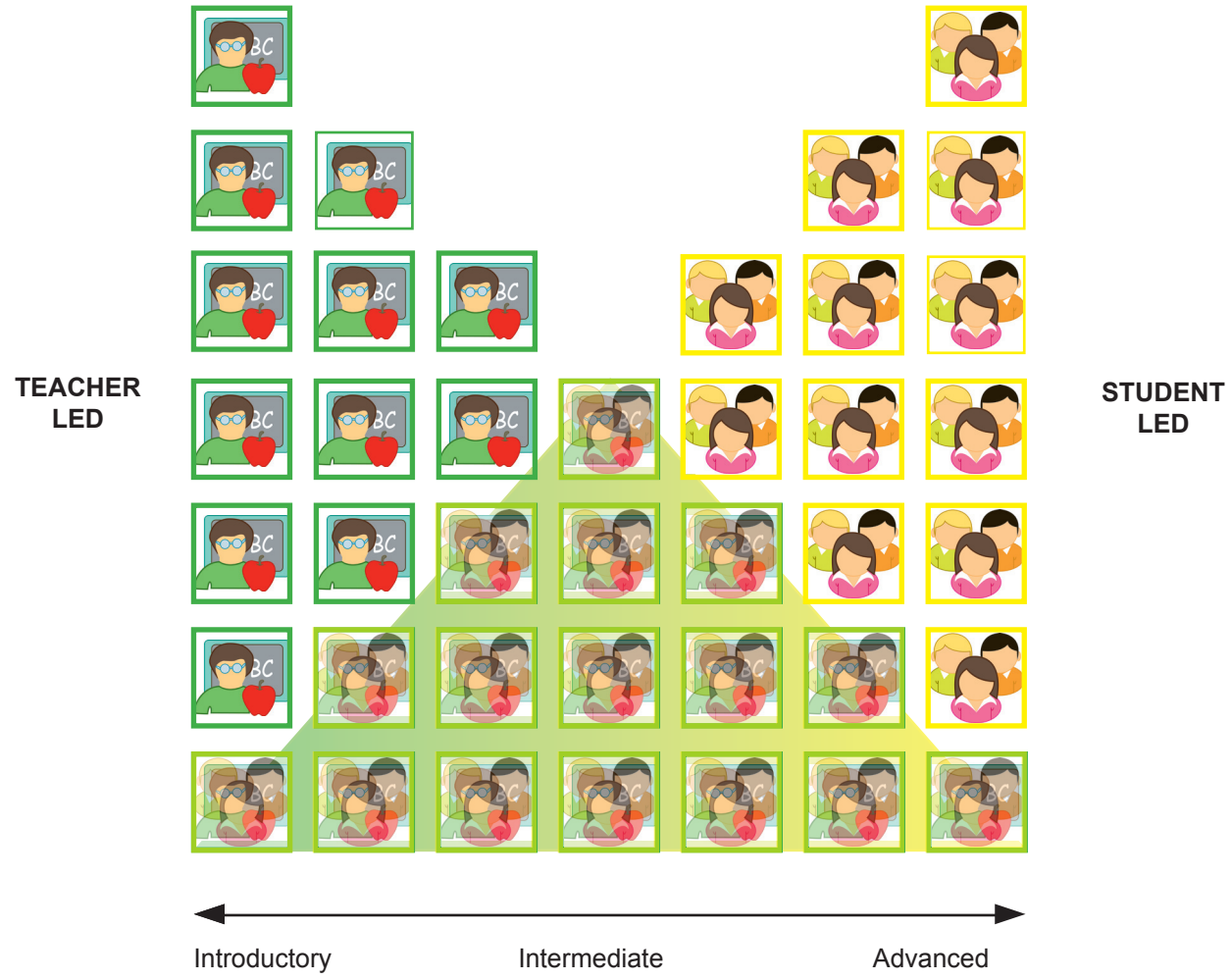
Scenario to Be Determined
Schools may also consider other methods for expanding or enhancing delivery of CTS programs, keeping in mind that the quality of interaction between student and teacher has a profound influence on learning. Many of the options outlined can be used as an extension to, or in combination with, standard class timetabling.

APPENDIX E: ALTERNATIVE DELIVERY STRATEGIES FOR CTS

Organizing for Learning

Multi-activity learning supports the concurrent delivery of different courses and/or learning tasks within a common time frame. The process empowers students, working individually or in groups, to assume responsibility for completing courses or course components within a specified time period.

In multi-activity learning, teacher and student share responsibility for managing the learning process. The process requires students to become self-directed learners who are able to manage their time, energy and resources in effective ways. As students move from introductory to advanced levels and become more proficient in managing their learning, teachers may introduce a larger number of course and activity choices.



Multi-activity learning requires much structure and planning prior to implementation, as well as class time spent in orienting students to expectations and the learning process. The role of the teacher in multi-activity learning is to:

- plan and develop a range of learning activities
- facilitate and support the learning process for individual students or groups of students
- evaluate student performance and learning outcomes.

Some CTS courses can be delivered in regular classrooms, while others require the use of more specialized facilities. Schools are encouraged to use on- and off-campus learning environments in addressing student needs. Learning environments, whether on- or off-campus, must address the policies and guidelines for facilities, equipment and safety as defined in the course parameters.

Schools may find it desirable to expand learning environments suited to the delivery of CTS programs by:

- making innovative and effective use of existing facilities and equipment
- renovating existing facilities
- using facilities and equipment in the community
- sharing facilities and equipment in neighbouring schools and school systems
- using distance learning technologies and other alternative delivery strategies.

CTS learning environments should provide opportunities for students to work individually or with others in a supportive atmosphere that reflects due diligence to health and safety. When possible, work areas for CTS should:

- be flexible and multipurpose, supporting hands-on learning as well as research, note taking and discussion
- enable teachers to readily observe, supervise and assess student performance
- facilitate a shared and team approach to instructional delivery
- provide easy access to learning resources, computers and other technology.

Establishing Scheduling/Delivery Strategies

Schools and school systems are encouraged to consider the many methods of course delivery available to them when they plan course offerings in CTS. While most courses can be offered through standard class scheduling practices, the structure of CTS, its focus on outcomes, and the use of off-campus delivery and enhanced distance learning tools enable schools to expand student access to CTS courses. Specific scheduling and delivery strategies will be determined by:

- courses being offered
- teacher background, expertise and instructional approach
- resources available in the school and community
- the degree of choice and self-direction provided for students.

Regardless of particular course scheduling and delivery strategies adopted by schools, any method of delivering CTS courses must ensure that:

- students are apprised of their registration in CTS courses, and is maintained
- certificated teachers are assigned to deliver or supervise the instruction
- students are provided access to a minimum of 25 hours of instruction per credit at the senior high school level, with exceptions as noted in the *Guide to Education: ECS to Grade 12* (http://education.alberta.ca/admin/resources/guidetoed.aspx)
- instruction and assessment are based on outcomes in the CTS program of studies
- there are designated times when teachers are available to the students
- students know, prior to enrolling in courses, how and when they will be able to access the instructional expertise of teachers.

Shared Delivery

Schools may decide to expand their delivery of CTS by making expertise and/or resources present in one school available to other schools. Sharing may occur among schools within the same school system, or through special agreements with schools in a neighbouring system. Shared delivery may involve the use of mobile labs, the sharing of teachers among schools, and/or the bussing of students to other schools offering complementary programs and facilities.

Off-campus Delivery

Through work site learning and partnerships with local business/industry and post-secondary institutions, off-campus education provides access to instructional expertise and specialized facilities available within the community. Off-campus education may encompass community partnerships, job shadowing, job sharing, mentorships, work study, Workplace Readiness/Practicum, Work Experience, the Registered Apprenticeship Program (RAP), the Green Certificate Program, and Career Internship.

For more information on off-campus education, visit the Alberta Education website at http://education.alberta.ca/teachers/program/off-campus.aspx.

Distance Education Technology

The use of information, communication and multimedia technologies can be another effective means of expanding and/or enhancing the delivery of CTS courses. Distance education technology can be used to:

- help students learn difficult concepts
- deliver instruction in new areas where there may be a lack of teacher expertise.

While the potential for distance education technology to deliver a range of CTS courses is expanding rapidly, some courses focus on the development of workplace competencies and cannot be effectively delivered unless the student has access to hands-on learning, either in a lab or work site setting. Such courses do not lend themselves to technological delivery unless supported by other forms of instruction and practice.

Expanded Time Frames

CTS courses for senior high school students during summer breaks, evenings and weekends may be offered by boards, accredited private schools and other accredited high schools; e.g., private and public colleges.

The program requirements noted in the *Guide to Education: ECS to Grade 12*, available at http://education.alberta.ca/admin/resources/guidetoed.aspx, apply to all schools offering senior high school summer, evening and weekend programs for credit, except that, for these programs, instructional time may vary. Schools must provide access to instruction of at least 16 hours per credit except for Work Experience 15, 25 and 35, Special Projects 10, 20 and 30 and the Registered Apprenticeship Program courses that require 25 hours per credit even when offered in summer, evening or weekend programs.

Skills Centres

A **skills centre** is a complementary learning centre established and maintained by a single school authority with possible partnerships with post-secondary institutions and/or business and industry. A skills centre provides students with career-focused programs supporting successful transitions into the workplace, further learning in apprenticeships and post-secondary programs.

Regional Skills Centres

A **regional skills centre** is a community-based learning centre established and maintained by a partnership council of multiple school authorities, post-secondary institutions and/or business and industry to meet the unique needs of a regional community. The regional skills centre provides career-focused programs offered by teachers and industry experts with workplace-recognized credentials using industry-standard equipment in specialized work spaces.

Skills Centres and Regional Skills Centres	
complement senior high school CTS classrooms and labs by providing more cost efficient and focused delivery of intermediate and advanced CTS courses	
support successful transitions for senior high school students to the workplace and to further learning in apprenticeships and post-secondary programs through a selection of CTS pathways in single or multiple occupational areas	
complement existing senior high school CTS labs by providing more cost efficient and focused delivery of intermediate and advanced CTS courses	
Skills Centres:	**Regional Skills Centres:**
• may respond to local economic and labour market priorities	• respond to local economic and labour market priorities
• may provide any time, any place, any pace access to instruction through flexible hours of operation	• provide any time, any place, any pace access to instruction through flexible hours of operation
• may support learners through apprenticeship training, business/industry workshops, community learning programs and professional development for teachers	• support learners through apprenticeship training, business/industry workshops, community learning programs and professional development for teachers
• may support community and local business commitment to lifelong learning by offering training and retraining to meet labour needs in regions of the province	• support community and local business commitment to lifelong learning by offering training and retraining to meet labour needs in regions of the province

APPENDIX F: HEALTH AND SAFETY IN CTS

Health and Safety in CTS Learning Environments

Providing healthy and safe CTS learning environments will require teachers, school administrators and school authorities to:

- understand how safety is addressed in the CTS classroom and/or specialized facility
- review present safety practices within CTS learning environments, on- and off-campus
- develop and maintain effective health and safety programs
- plan for the design and/or updating of CTS learning environments
- plan professional development and in-service activities related to health and safety.

CTS courses address safety and risk management through the identification of specific elements in CTS course parameters (e.g., equipment, facilities, instructional qualifications) that need to be in place to support safe learning. Learning outcomes in each CTS course require safety awareness and the demonstration of safe practices related to the occupational area for the CTS course.

Legislation and Regulations

School Act

Under the *School Act*, a school authority shall ensure that each student enrolled in a school is provided with a safe and caring environment that fosters and maintains respectful and responsible behaviours. Teachers must provide instruction competently to students, teach the programs of study that are prescribed, approved or authorized, and are responsible for each student's health and safety while under teacher supervision.

CTS Learning Environments

School authorities, school administrators and CTS teachers are responsible for exercising due diligence, taking reasonable care, and doing everything that is reasonably practical to ensure that CTS learning environments are in compliance with applicable legislation and are healthy and safe for teachers, instructors and students.

CTS Program of Studies

The CTS program of studies addresses health and safety through the identification of specific elements that need to be in place to support safe learning environments, including facilities, tools, equipment, materials and instructional qualifications. Additionally, learning outcomes related to and requiring health and safety awareness and the demonstration of safe practices are integrated in all CTS courses. These outcomes are reinforced by the teacher throughout the delivery of each CTS course. Student performance and growth in self-management and working with others in safe environments is assessed with the involvement of the student, teacher, peers and others as part of each CTS course.

Safety concerns in CTS learning environments vary greatly from occupational area to occupational area. Students learn to safely manage themselves and the tools they work with in each learning environment. A culture of health and safety awareness is integrated into the entire school environment as students develop attitudes, skills, knowledge and values around personal safety and the safety of others that transfers beyond the classroom to their personal life and work life.

Occupational Health and Safety Act, Regulation and *Code*

The health and safety of individuals and the environment is protected by law. All workers have the right to know about potential hazards they may come in contact with, to be protected from injury and to receive proper care and attention if they do become involved in an incident.

In Alberta, Human Service's Safe and Fair Workplaces is responsible for developing and enforcing occupational health and safety legislation. The *Occupational Health and Safety Act, Regulation* and *Code* (OHS) identify the roles and responsibilities of employers and employees in maintaining a healthy and safe working environment in order to minimize the occurrence of workplace incidents. OHS exists to protect and promote the health and safety of all workers, including all paid workers, visitors, volunteers, contracted staff and temporary workers.

For more information, visit the Alberta Human Services website at http://humanservices.alberta.ca/working-in-alberta/307.html.

As an employer, the school authority must comply with the OHS legislation. The superintendent, senior officers, principals and non-school-based district staff have a statutory obligation to do everything reasonably practical to provide a safe and healthy environment for all employees, students and volunteers. Additionally, school authorities ensure that their employees are:

- aware of their responsibilities
- aware of the hazards associated with their work
- able to carry out their work safely
- routinely inspecting their instructional areas
- trained in measures for their own health and safety.

For more information regarding the Alberta *Occupational Health and Safety Act, Regulation* and *Code* (OHS) in a school setting, visit http://humanservices.alberta.ca/working-in-alberta/388.html.

OHS Guidelines for Students

A student is not generally defined as a worker while taking instruction in a school or classroom situation, and, therefore, is not covered by the OHS legislation; however, a student may be considered a worker under OHS legislation while in certain off-campus programs. Many of the components of OHS are applicable to student health and safety.

For more information on students as workers, see http://humanservices.alberta.ca/documents/WHS/WHS-PUB-LI022.pdf.

OHS and CTS Class Sizes

The school principal, in accordance with school authority policy and/or regulation, has the authority to establish class size. OHS does not define a maximum number of students permitted in a CTS learning environment.

Workers' Compensation Act

Workers' Compensation Board Coverage for School Authority Staff

The Workers' Compensation Board (WCB) insures many of the workers in a school, including clerical, custodial, support staff, non-certificated instructors and teacher aides. Teachers, principals, vice-principals and others with the certification required to be teachers, and who are employed as teachers, are covered only in specific instances, such as those who teach designated CTS courses (WCB occupational descriptors), as well as anyone who performs duties related to the teaching of these courses. Certificated instructional staff not teaching CTS courses are covered through the Alberta School Employee Benefits Plan or another insurer.

For more information on WCB coverage of school personnel, see Policy 06–01 Part II, Application 3(7) (October 2005) at http://wcb.ab.ca/public/policy/manual/0601p2a3.asp.

Workers' Compensation Board Coverage for Students

The *Workers' Compensation Act* (WCA) applies to students attending and participating in work experience or the practical experience part of a work-related program. For the purposes of insurance coverage, the WCA states that these students will be considered to be workers employed by the Government of Alberta. This statement affects procedures for reporting student injuries in the workplace and is important information for employers involved in off-campus education programs.

For more information on insurance coverage of students in work experience and off-campus education programs, see the *Workers' Compensation Regulation* (AR 325/2002), section 7(1)(e) at http://www.qp.alberta.ca/documents/Regs/2002_325.pdf, and the *Workers' Compensation Act*, section 153(3) at http://www.qp.alberta.ca/documents/Acts/W15.pdf.

Health and Safety Plans

School authorities and schools demonstrate due diligence by developing health and safety plans to meet legislative requirements. To ensure that there is an effective health and safety plan in place requires the cooperation and support of all those responsible for the learning environment, implementation of programs of study and delivery of instruction, including the education community, government departments and agencies that have responsibility for various aspects of health and safety.

Elements of a health and safety plan include:

- establishing clearly defined policies, practices and procedures
- monitoring procedures to ensure that safe policies, practices and procedures are being followed
- communicating information on issues related to health and safety
- auditing/inspecting the learning environment
- training in issues related to health and safety
- implementing the eight elements of a health and safety management system.

For more information about the eight elements of a health and safety management system, see http://humanservices.alberta.ca/working-in-alberta/331.html.

Roles and Responsibilities for Ensuring School Health and Safety

Alberta Education:

- identifies health and safety outcomes and activities within the program of studies.

School authorities:

- facilitate the implementation of safety policies
- provide for, and administer, adequate funding for the provision of a healthy and safe environment
- ensure that the requirements of various agencies, such as, but limited to, OHS, the Fire Commissioner, and the Building Codes and Standards, are carried out in schools and other work sites under their authority
- provide appropriate materials and equipment to maintain adequate standards of health and safety
- establish procedures to monitor safety policies and direct investigations, as required.

Superintendents:

- formulate and implement school board policies
- communicate school board policies, especially the minimum standards, to the staff, students, parents and public
- establish a system to monitor the effectiveness of health and safety policies and practices in schools
- must ensure that certificated teachers are provided with adequate training, scheduled time and other resources to enable them to perform the necessary inspections, orientations, monitoring, assessment and evaluation for the effective delivery of the program.

School administrators:

- provide for educational programs and resources that assist in the development of good health and safety practices and attitudes
- ensure that the CTS classroom/specialized facility is inspected annually to ensure a safe and caring environment that is appropriate for educational activities
- ensure that teachers provide safety instruction as required in the CTS courses they teach
- ensure that each CTS classroom/specialized facility provides adequate space for the health and safety of the number of students enrolled
- report injury incidents to the school board and the Workers' Compensation Board, as required.

CTS instructional staff:

- maintain appropriate health and safety training; e.g., Workplace Hazardous Materials Information System (WHMIS), First Aid, transportation of dangerous goods (TDG)
- complete an annual audit/inspection of the learning environment
- enforce clearly defined policies, practices and procedures for safety
- monitor procedures to ensure that health and safety policies, practices and procedures are being followed
- identify substandard acts and conditions and determine effective control measures to modify student behaviour and lab/shop classroom/specialized facility conditions or procedures
- evaluate safety education efforts, monitor student behaviour and initiate corrective action, as required
- ensure students are instructed in the identification of potential hazards, health and safety requirements and proper operation and/or use of machines, tools and equipment in the CTS learning environment
- provide appropriate personal protective equipment (PPE) and maintain all PPE in good condition.

General instructional staff members:

- assume responsibility for protecting the personal health and safety of the students in their care
- model safe behaviour in teaching practices and procedures
- accept, as a professional obligation, the responsibility for providing and emphasizing health and safety education in the learning environment
- implement health and safety education programs in accordance with school board policies and the regulations and standards of other legislative and regulating bodies
- evaluate health and safety education efforts
- monitor student behaviour and, if students are in imminent danger to themselves or others, take immediate and appropriate steps to initiate corrective action, as required
- identify unsafe environmental conditions and correct and/or report them in writing.

Students:

- are knowledgeable in both environmental health and safety factors and healthy and safe behavioural practices
- comply with the classroom/specialized facility health and safety plan
- demonstrate that they are capable in the safe set-up and use of equipment and materials before they are permitted to use the equipment and materials
- obtain permission from the program teacher before they may use equipment, tools and/or hazardous materials.

Parents/Legal Guardians:

- inform the school about relevant student medical problems
- inform the school if they wish their child to be excluded from particular course activities with potential hazards.

CTS Health and Safety Plans

The establishment of effective CTS health and safety plans requires that attention from personal, professional and economic perspectives is given to:

- facilities, tools, equipment and materials
- instructional planning
- classroom management
- appropriate training needs of both CTS teachers and students
- due diligence.

Health and Safety Management Systems

A health and safety management system is a process put in place by an employer to minimize the incidence of injury and illness to workers involved in the operations carried out by the employer. This is accomplished through identifying, assessing and controlling risks and potential risks to workers in all workplace operations. Teachers are required to implement a health and safety management system in the CTS classroom/specialized facility instructional area as well.

In Case of an Incident or Injury

All work-related injuries and illnesses must be reported. If students are physically injured at school, they must report every injury—small or serious—to their teacher. A serious injury or illness is one that requires medical treatment and results in time away from school. **Student injuries must be documented, investigated and reported.**

According to OHS, when a workplace incident or injury occurs, a teacher must immediately:

- seek medical attention, as required
- record the injury on a First Aid form and provide a copy of the First Aid record to the student
- report the situation, if it is serious or could have been serious, to the school authority and to Human Services Workplace Health and Safety, as required by the policies and practices of the school authority
- report the injury or illness within 72 hours to the Workers' Compensation Board or other insurance provider, when applicable
- investigate, correct (if necessary) and document the situation, keeping a copy of the report for future review by an OHS officer.

In the event of an incident, it is important to act promptly and also to evaluate the extent of the injury/incident and the potential for further damage to personnel or property. When an incident occurs:

- take control of the situation through effective management techniques
- ensure that any injured person(s) is/are cared for
- ensure that no further injury or damage occurs
- proceed to get help.

APPENDIX G: CAREER PLANNING WITH STUDENTS

Role of the Counsellor

The role of the school counsellor in CTS is one of helping students make effective career decisions through awareness and preparation. Counsellors can help students plan their senior high school program and identify pathways, occupational areas and courses most appropriate to:

- long- and short-term goals
- interests and aptitudes
- learning styles and abilities.

Through effective partnerships with other school personnel, counsellors can assume a key role in coaching students to:

- explore a range of career and occupational opportunities
- explore possible pathways, both specialized and credentialed
- plan the necessary steps to meet entry-level requirements for particular career choices
- ensure prerequisite courses are identified
- negotiate effective transitions to the workplace or related post-secondary programs.

Counsellors can also help teachers and administrators determine which clusters and courses should be made available to students, and help students, parents and community partners understand the nature and structure of the CTS program.

Planning CTS Pathways with Students

As students progress through each level of learning in CTS, they participate in career planning while exploring career options in a variety of occupational areas. To encourage student success:

- encourage the creation and completion of personal inventories
- develop portfolios, or other means of collecting information, that link CTS and other course learning experiences to career path building
- remind students to review current senior high school course selections, extracurricular activities, hobbies and interests and find common themes that connect to imagined or anticipated future roles. Are there gaps? What might they have to change to satisfy specific needs for their individual career path building? How might their experiences in CTS support their possible options?
- review plans to help students clearly define goals
- encourage students to think about possibilities.

Assess Interests, Skills and Personality

Students may complete one or more interests, skills and personality tests to provide insights into personal strengths, aspirations and abilities. Several tests can be found on the Alberta Learning Information Service (ALIS) website under "Self-Assessment Tools" at http://alis.alberta.ca/hs/cp/cpt/planning-tools.html.

Explore and Investigate Career and Education Opportunities

A variety of resources are available to investigate careers of interest. Encourage students to consider the wide range of work options available, try finding out the specifics of particular careers of interest, and investigate recent trends in business and industry.

Various resources and tools (including "Researching a Specific Occupation") are available on the ALIS website at http://careerinsite.alberta.ca/careerinsite.aspx.

Information about various occupations is available from the OCCinfo section on the ALIS website at http://alis.alberta.ca/occinfo/Content/RequestAction.asp?format=html&aspAction=GetHomePage&Page=Home.

Information about various certification and registration requirements is available from the CERTinfo section on the ALIS website at http://alis.alberta.ca/certinfo/Content/RequestAction.asp?format=html&aspAction=GetCERTHomePage&Page=CERTHome.

Information about wages and salary expectations is available from the WAGEinfo section on the ALIS website at http://alis.alberta.ca/wageinfo/Content/RequestAction.asp?format=html&aspAction=GetWageHomePage&Page=Home.

Information about post-secondary institutions throughout Alberta and Western Canada is available from the EDinfo section on the ALIS website at http://alis.alberta.ca/edinfo/Content/RequestAction.asp?format=html&aspAction=GetHomePage&Page=Home.

Plan a CTS Pathway

Together with the student, reflect on all the information gathered on interests, skills, personality, and career and education possibilities while exploring CTS courses and pathways for that student.

Review CTS courses offered and discuss options. If possible, have the student discuss the CTS program with older students or graduates. Investigate the prerequisites required for courses of interest. Examine sample CTS pathways and consider how they might be modified. Use the CTS Pathway Planner, available on the Alberta Education website at http://education.alberta.ca/teachers/program/cts/resources/pathways.aspx, to personalize a CTS pathway.

Teachers and counsellors should provide students with guidance and support during the pathway planning process.

Review, Reflect On and Revise CTS Pathway

At least once a year, students should reflect on their CTS pathway and the courses taken during the year. Encourage students to use the CTS Pathway Planner tool, available on the Alberta Education website at http://education.alberta.ca/teachers/program/cts/resources/pathways.aspx, to help organize and record their thoughts. If necessary, make revisions to the CTS pathway based on the student's reflections.

APPENDIX H: CTS PROJECT COURSE FAQs

What is a project course?

A project course develops project design and management skills to extend and enhance competencies and skills in other CTS courses through contexts that are personally relevant.

How can I use a project course?

Introductory project courses must be connected with two successfully completed CTS courses, of which one must be from the same occupational area and level as the project. The intermediate project course must connect with a minimum of two successfully completed CTS courses, of which one must be at the intermediate level and in the same occupational area as the project. Any advanced project course must connect with a minimum of two successfully completed CTS courses, of which one must be at the advanced level and in the same occupational area as the project. The connected courses should be determined by the student and teacher before beginning any work on the project course.

Note: Project courses cannot be connected to other project courses.

What else do teachers need to know about project courses?

A project course can be used with any current CTS courses or ones that have been previously awarded credit to the student.

Students, with guidance from the teacher, or with the teacher directly, need to develop a course outline that explains the rationale for the student taking the project course.

Can I use a project course in conjunction with a practicum course(s)?

No.

Can a CTS course be linked to multiple project courses?

Yes, because you can identify different key (general) outcomes from each course and justify the connection between the courses.

Example Uses of Project Courses

Below are some of the various combinations that involve project courses.

Example 1 – using two CTS courses from different occupational areas at the same level and one project course.	**Example 2 – using two CTS courses from the same occupational area at different levels and one project course.**	**Example 3 – using two CTS courses from the same occupational area at the same level and one project course.**
TOU1040: The Food & Beverage Industry FOD1060: Canadian Heritage Foods TOU1910: TOU Project A **or** FOD1910: FOD Project A	CON1010: Construction Tools & Materials CON2020: Concrete Forming CON1910: CON Project A **or** CON2910: CON Project B **or** CON2920: CON Project C	NET3100: Network Media & Devices, Security NET3110: Telecommunications 2 NET3910: NET Project D **or** NET3920: NET Project E
Example 4 – using three CTS courses from the same occupational area at different levels and one project course.	**Example 5 – using three CTS courses from three different occupational areas at different levels and one project course.**	**Example 6 – using three CTS courses from two different occupational areas at the same level and one project course.**
CON1010: Construction Tools & Materials CON2020: Concrete Forming CON3040: Stair Construction CON1910: CON Project A **or** CON2910: CON Project B **or** CON2920: CON Project C **or** CON3910: CON Project D **or** CON3920: CON Project E	COM1055: Web Design 1 INF2070: Database 2 LOG3040: Inventory Management 2 COM1910: COM Project A **or** INF2910: INF Project B **or** INF2920: INF Project C **or** LOG3910: LOG Project D **or** LOG3920: LOG Project E	CSE1110: Structured Programming 1 CSE1240: Robotics Programming 1 ELT1130: Robotics 1 CSE1910: CSE Project A **or** ELT1910: ELT Project A

Example 7 – using two CTS courses from the same occupational area at different levels and one of the courses was awarded in a previous semester and one project course.	**Example 8 – using two CTS courses from the same occupational area at different levels and one of the courses was an older CTS course prior to the new CTS courses being implemented and one project course.**	**Example 9 – using three CTS courses from the same occupational area at the same level and using two project courses.**
CON1010: Construction Tools & Materials (previously awarded in Semester 1) CON2020: Concrete Forming (currently taking in Semester 2) CON1910: CON Project A **or** CON2910: CON Project B **or** CON2920: CON Project C	FIN1020: Service Business 1 (previously awarded prior to new CTS courses being implemented) FIN2020: Merchandising Business 1 (previously awarded prior to new CTS courses being implemented) FIN1910: FIN Project A **or** FIN2910: FIN Project B **or** FIN2920: FIN Project C	**Previous School Year** FIN2020: Retail Accounting 1 **Current School Year** FIN3010: Advanced Accounting FIN3020: Management Accounting FIN3030: Capital Accounting FIN3910: FIN Project D – this project course can be used with FIN2020 and FIN3010 FIN3920: FIN Project E – this project course can be used with FIN3020 and FIN3030

APPENDIX I: CTS INTRODUCTORY PROJECT COURSE TEMPLATE

This template can be used by a teacher/student to assist in planning for an introductory project course from the CTS program of studies.

An introductory CTS project course must connect with a minimum of two successfully completed CTS courses, one of which must be at the introductory level and in the same occupational area as the project course. The other CTS course(s) can be either at the same level or at the intermediate level from any occupational area.

A project course cannot be connected to other project courses or practicum courses.

Student Name:
Click and type student name.

Student ID Number (optional):
Click and type student ID number.

Teacher Name:
Click and type teacher name.

Start Date:
DD-MM-YYYY

End Date:
DD-MM-YYYY

Project Course Code:
Click and type project course code.

Project Course Title:
Click and type project course title.

CTS course connections and the year the credits were or will be awarded. Expand the table below, as needed, by adding new rows.

CTS courses that the project course connects with (minimum 2)	When the credits were or will be awarded	Occupational Area(s)
CTS introductory course (required)	**When the credit was or will be awarded (mm–yyyy)**	**Same occupational area as this project course**
CTS introductory/intermediate course (required)	**When the credit was or will be awarded (mm–yyyy)**	**Occupational area**
CTS introductory/intermediate course (optional)	**When the credit was or will be awarded (mm–yyyy)**	**Occupational area**
CTS introductory/intermediate course (optional)	**When the credit was or will be awarded (mm–yyyy)**	**Occupational area**
CTS introductory/intermediate course (optional)	**When the credit was or will be awarded (mm–yyyy)**	**Occupational area**

What are the details of this project?
Click and type response.

What are the attitudes, skills and knowledge that will be enhanced and extended by completing this project?
Click and type response.

What are the safety concerns for this project?
Click and type response.

What will be needed to accomplish this project (e.g., tools, materials, money, people, time)?
Click and type response.

Expand the table below, as needed, by adding new rows.

Connected courses (minimum of two CTS courses are required)	**Outcomes being linked** (minimum of one outcome from each CTS course is required)
Course Name and Code (required)	**Outcome** (required)
	Outcome (optional)
	Outcome (optional)
Course Name and Code (required)	**Outcome** (required)
	Outcome (optional)
	Outcome (optional)
Course Name and Code (optional)	**Outcome** (required if this additional course is connected to the project course)
	Outcome (optional)
	Outcome (optional)
Course Name and Code (optional)	**Outcome** (required if this additional course is connected to the project course)
	Outcome (optional)
	Outcome (optional)
Course Name and Code (optional)	**Outcome** (required if this additional course is connected to the project course)
	Outcome (optional)
	Outcome (optional)

What will be accomplished by linking these outcomes in this project?

Click and type response.

Why were these courses and key outcomes chosen?

Click and type response.

Introductory, Intermediate and Advanced CTS Project Course Rubric

(Assessment of Outcomes 1–5)

Student Name: _____ Teacher: _____

Name of Project: _____ Start Date: _____

Finish Date: _____

Criteria	Excellent	Proficient	Adequate	Limited	Insufficient
Identify the connection between the project course and two or more CTS courses (1.1, 1.2) (4.1, 4.3)	Significantly contribute to identifying prior CTS outcomes connected to project. Give an insightful explanation of how prior CTS knowledge, skills and attitudes connect with the project course.	Contribute to identifying prior CTS outcomes connected to project. Give a relevant explanation of how prior CTS knowledge, skills and attitudes connect with the project course.	Somewhat contribute to identifying prior CTS outcomes connected to project. Give a reasonable explanation of how prior CTS knowledge, skills and attitudes connect with the project course.	Listen while others contribute to identifying prior CTS outcomes connected to project. Need others to explain details of how prior CTS knowledge, skills and attitudes connect with the project course.	Has not yet provided evidence.
Propose the project and/or performance (2.1, 2.2, 2.3, 2.4) (4.1, 4.2, 4.3)	Outline proposal collaboratively with teacher. Take a leading role in the development of proposal; e.g., • prepare detailed work plan that includes purpose, deliverables, timelines, terms and resources • identify health and safety standards • define assessment standards (indicators of success) • obtain approval.	Review proposal by teacher. Take a role in the development of proposal; e.g., • prepare detailed work plan that includes purpose, deliverables, timelines, terms and resources • identify health and safety standards • define assessment standards (indicators of success) • obtain approval.	Review proposal by teacher. Take a minimal role in the development of proposal; e.g., • prepare detailed work plan that includes purpose, deliverables, timelines, terms and resources • identify health and safety standards • define assessment standards (indicators of success) • obtain approval.	Review proposal by teacher. Listen while others work on the development of proposal; e.g., • prepare detailed work plan that includes purpose, deliverables, timelines, terms and resources • identify health and safety standards • define assessment standards (indicators of success) • obtain approval.	Has not yet provided evidence.
Complete project and/or performance as outlined* (3.1) (4.1, 4.2, 4.3)	Demonstrate passion and dedication to complete project, as outlined. Skillfully demonstrate the ability to apply and model leadership skills to solve problems, make decisions and complete tasks as planned.	Demonstrate initiative to complete project, as outlined. Competently demonstrate the ability to apply leadership skills to solve problems, make decisions and complete tasks as planned.	Demonstrate a willingness to complete project, as outlined. Satisfactorily demonstrate the ability to apply skills to solve problems, make decisions and complete tasks as planned.	Work, with constant supervision, toward completion of the project, as outlined. Often need help to demonstrate the ability to apply skills to solve problems, make decisions and complete tasks as planned.	Has not yet provided evidence.

*****To add more detail, share examples of how this criterion was met on the back or on a separate sheet.

Introductory, Intermediate and Advanced CTS Project Course Rubric (continued)

Criteria	Excellent	Proficient	Adequate	Limited	Insufficient
Comply with safety standards and monitor performance during project* (2.2) (3.2) (4.1, 4.2, 4.3)	Transfer and apply health and safety standards to all working environments throughout the project. Effectively monitor progress and make significant adjustments for improvement. Ask insightful questions when necessary. Consistently adhere to planned deadlines.	Apply health and safety standards to all working environments throughout the project. Somewhat effectively monitor progress and make appropriate adjustments for improvement. Ask relevant questions when necessary. Usually adhere to planned deadlines.	Apply, with assistance, health and safety standards to all working environments throughout the project. Follow the lead of others to monitor progress and make adjustments for improvement. Ask reasonable questions when necessary. Sometimes adhere to planned deadlines.	Apply, with constant supervision, health and safety standards to all working environments throughout the project. Need the support of the teacher to monitor progress and make adjustments for improvement. Need to ask questions when necessary. Rarely adhere to planned deadlines.	Has not yet provided evidence.
Present project and/or performance (3.3) (4.1, 4.2, 4.3)	Share a wide variety of personal experiences related to achieved outcomes and their relationship to original goals.	Share some personal experiences related to achieved outcomes and their relationship to original goals.	Share a personal experience related to an achieved outcome and its relationship to original goals.	Need help to share a personal experience related to an achieved outcome and its relationship to original goals.	Has not yet provided evidence.
Evaluate project and/or performance* (3.4) (4.1, 4.2, 4.3)	Use rubrics, exemplars and feedback effectively to examine processes and strategies. Make significant recommendations for improvement.	Use rubrics, exemplars and feedback somewhat effectively to examine processes and strategies. Make relevant recommendations for improvement.	Use rubrics, exemplars and feedback adequately to examine processes and strategies. Make predictable recommendations for improvement.	Need help to use rubrics, exemplars and feedback to examine processes and strategies. Use the ideas of others to make recommendations for improvement.	Has not yet provided evidence.
Complete career outcome as identified in course* (4.1, 4.2) (5.1, 5.2)	Refine career pathway plan. Identify significant connections between career and personal values and goals.	Update career pathway plan. Identify more connections between career and personal values and goals.	Review career pathway plan. Identify a few connections between career and personal values and goals.	Review career pathway plan. With help be able to identify a few connections between career and personal values and goals.	Has not yet provided evidence.
Comments:					

*****To add more detail, share examples of how this criterion was met on the back or on a separate sheet.

APPENDIX J: CTS INTERMEDIATE PROJECT COURSE TEMPLATE

This template can be used by a teacher/student to assist in planning for an intermediate project course from the CTS program of studies.

An intermediate CTS project course must connect with a minimum of two successfully completed CTS courses, one of which must be at the intermediate level and in the same occupational area as the project course. The other CTS course(s) can be at any level and from any occupational area.

A project course cannot be connected to other project courses or practicum courses.

Student Name:
Click and type student name.

Student ID Number (optional):
Click and type student ID number.

Teacher Name:
Click and type teacher name.

Start Date:
DD-MM-YYYY

End Date:
DD-MM-YYYY

Project Course Code:
Click and type project course code.

Project Course Title:
Click and type project course title.

CTS course connections and the year the credits were or will be awarded. Expand the table below, as needed, by adding new rows.

CTS courses that the project course connects with (minimum 2)	When the credits were or will be awarded	Occupational Area(s)
CTS intermediate course (required)	**When the credit was or will be awarded (mm–yyyy)**	**Same occupational area as this project course**
CTS introductory/intermediate/ advanced course (required)	**When the credit was or will be awarded (mm–yyyy)**	**Occupational area**
CTS introductory/intermediate/ advanced course (optional)	**When the credit was or will be awarded (mm–yyyy)**	
CTS introductory/intermediate/ advanced course (optional**)**	**When the credit was or will be awarded (mm–yyyy)**	**Occupational area**
CTS introductory/intermediate/ advanced course (optional**)**	**When the credit was or will be awarded (mm–yyyy)**	**Occupational area**

What are the details of this project?
Click and type response.

What are the attitudes, skills and knowledge that will be enhanced and extended by completing this project?
Click and type response.

What are the safety concerns for this project?
Click and type response.

What will be needed to accomplish this project (e.g., tools, materials, money, people, time)?
Click and type response.

Expand the table below, as needed, by adding new rows.

Connected courses (minimum of two CTS courses are required)	**Outcomes being linked** (minimum of one outcome from each CTS course is required)
Course Name and Code (required)	**Outcome** (required)
	Outcome (optional)
	Outcome (optional)
Course Name and Code (required)	**Outcome** (required)
	Outcome (optional)
	Outcome (optional)
Course Name and Code (optional)	**Outcome** (required if this additional course is connected to the project course)
	Outcome (optional)
	Outcome (optional)
Course Name and Code (optional)	**Outcome** (required if this additional course is connected to the project course)
	Outcome (optional)
	Outcome (optional)
Course Name and Code (optional)	**Outcome** (required if this additional course is connected to the project course)
	Outcome (optional)
	Outcome (optional)

What will be accomplished by linking these outcomes in this project?

Click and type response.

Why were these courses and key outcomes chosen?

Click and type response.

Introductory, Intermediate and Advanced CTS Project Course Rubric

(Assessment of Outcomes 1–5)

Student Name: _____ Teacher: _____

Name of Project: _____ Start Date: _____

Finish Date: _____

Criteria	Excellent	Proficient	Adequate	Limited	Insufficient
Identify the connection between the project course and two or more CTS courses (1.1, 1.2) (4.1, 4.3)	Significantly contribute to identifying prior CTS outcomes connected to project. Give an insightful explanation of how prior CTS knowledge, skills and attitudes connect with the project course.	Contribute to identifying prior CTS outcomes connected to project. Give a relevant explanation of how prior CTS knowledge, skills and attitudes connect with the project course.	Somewhat contribute to identifying prior CTS outcomes connected to project. Give a reasonable explanation of how prior CTS knowledge, skills and attitudes connect with the project course.	Listen while others contribute to identifying prior CTS outcomes connected to project. Need others to explain details of how prior CTS knowledge, skills and attitudes connect with the project course.	Has not yet provided evidence.
Propose the project and/or performance (2.1, 2.2, 2.3, 2.4) (4.1, 4.2, 4.3)	Outline proposal collaboratively with teacher. Take a leading role in the development of proposal; e.g., • prepare detailed work plan that includes purpose, deliverables, timelines, terms and resources • identify health and safety standards • define assessment standards (indicators of success) • obtain approval.	Review proposal by teacher. Take a role in the development of proposal; e.g., • prepare detailed work plan that includes purpose, deliverables, timelines, terms and resources • identify health and safety standards • define assessment standards (indicators of success) • obtain approval.	Review proposal by teacher. Take a minimal role in the development of proposal; e.g., • prepare detailed work plan that includes purpose, deliverables, timelines, terms and resources • identify health and safety standards • define assessment standards (indicators of success) • obtain approval.	Review proposal by teacher. Listen while others work on the development of proposal; e.g., • prepare detailed work plan that includes purpose, deliverables, timelines, terms and resources • identify health and safety standards • define assessment standards (indicators of success) • obtain approval.	Has not yet provided evidence.
Complete project and/or performance as outlined* (3.1) (4.1, 4.2, 4.3)	Demonstrate passion and dedication to complete project, as outlined. Skillfully demonstrate the ability to apply and model leadership skills to solve problems, make decisions and complete tasks as planned.	Demonstrate initiative to complete project, as outlined. Competently demonstrate the ability to apply leadership skills to solve problems, make decisions and complete tasks as planned.	Demonstrate a willingness to complete project, as outlined. Satisfactorily demonstrate the ability to apply skills to solve problems, make decisions and complete tasks as planned.	Work, with constant supervision, toward completion of the project, as outlined. Often need help to demonstrate the ability to apply skills to solve problems, make decisions and complete tasks as planned.	Has not yet provided evidence.

*****To add more detail, share examples of how this criterion was met on the back or on a separate sheet.

Introductory, Intermediate and Advanced CTS Project Course Rubric (continued)

Criteria	Excellent	Proficient	Adequate	Limited	Insufficient
Comply with safety standards and monitor performance during project* (2.2) (3.2) (4.1, 4.2, 4.3)	Transfer and apply health and safety standards to all working environments throughout the project. Effectively monitor progress and make significant adjustments for improvement. Ask insightful questions when necessary. Consistently adhere to planned deadlines.	Apply health and safety standards to all working environments throughout the project. Somewhat effectively monitor progress and make appropriate adjustments for improvement. Ask relevant questions when necessary. Usually adhere to planned deadlines.	Apply, with assistance, health and safety standards to all working environments throughout the project. Follow the lead of others to monitor progress and make adjustments for improvement. Ask reasonable questions when necessary. Sometimes adhere to planned deadlines.	Apply, with constant supervision, health and safety standards to all working environments throughout the project. Need the support of the teacher to monitor progress and make adjustments for improvement. Need to ask questions when necessary. Rarely adhere to planned deadlines.	Has not yet provided evidence.
Present project and/or performance (3.3) (4.1, 4.2, 4.3)	Share a wide variety of personal experiences related to achieved outcomes and their relationship to original goals.	Share some personal experiences related to achieved outcomes and their relationship to original goals.	Share a personal experience related to an achieved outcome and its relationship to original goals.	Need help to share a personal experience related to an achieved outcome and its relationship to original goals.	Has not yet provided evidence.
Evaluate project and/or performance* (3.4) (4.1, 4.2, 4.3)	Use rubrics, exemplars and feedback effectively to examine processes and strategies. Make significant recommendations for improvement.	Use rubrics, exemplars and feedback somewhat effectively to examine processes and strategies. Make relevant recommendations for improvement.	Use rubrics, exemplars and feedback adequately to examine processes and strategies. Make predictable recommendations for improvement.	Need help to use rubrics, exemplars and feedback to examine processes and strategies. Use the ideas of others to make recommendations for improvement.	Has not yet provided evidence.
Complete career outcome as identified in course* (4.1, 4.2) (5.1, 5.2)	Refine career pathway plan. Identify significant connections between career and personal values and goals.	Update career pathway plan. Identify more connections between career and personal values and goals.	Review career pathway plan. Identify a few connections between career and personal values and goals.	Review career pathway plan. With help be able to identify a few connections between career and personal values and goals.	Has not yet provided evidence.
Comments:					

***To add more detail, share examples of how this criterion was met on the back or on a separate sheet.

APPENDIX K: CTS ADVANCED PROJECT COURSE TEMPLATE

This template can be used by a teacher/student to assist in planning for an advanced project course from the CTS program of studies.

An advanced CTS project course must connect with a minimum of two successfully completed CTS courses, one of which must be at the advanced level and in the same occupational area as the project course. The other CTS course(s) must be at least at the intermediate level and can be from any occupational area.

A project course cannot be connected to other project courses or practicum courses.

Student Name:
Click and type student name.

Student ID Number (optional):
Click and type student ID number.

Teacher Name:
Click and type teacher name.

Start Date:
DD-MM-YYYY

End Date:
DD-MM-YYYY

Project Course Code:
Click and type project course code.

Project Course Title:
Click and type project course title.

CTS course connections and the year the credits were or will be awarded. Expand the table below, as needed, by adding new rows.

CTS courses that the project course connects with (minimum 2)	When the credits were or will be awarded	Occupational Area(s)
CTS advanced course (required)	**When the credit was or will be awarded (mm–yyyy)**	**Same occupational area as this project course**
CTS intermediate/advanced course (required)	**When the credit was or will be awarded (mm–yyyy)**	**Occupational area**
CTS intermediate/advanced course (optional)	**When the credit was or will be awarded (mm–yyyy)**	**Occupational area**
CTS intermediate/advanced course (optional)	**When the credit was or will be awarded (mm–yyyy)**	**Occupational area**
CTS intermediate/advanced course (optional)	**When the credit was or will be awarded (mm–yyyy)**	**Occupational area**

What are the details of this project?
Click and type response.

What are the attitudes, skills and knowledge that will be enhanced and extended by completing this project?
Click and type response.

What are the safety concerns for this project?
Click and type response.

What will be needed to accomplish this project (e.g., tools, materials, money, people, time)?
Click and type response.

Expand the table below, as needed, by adding new rows.

Connected courses (minimum of two CTS courses are required)	**Outcomes being linked** (minimum of one outcome from each CTS course is required)
Course Name and Code (required)	**Outcome** (required)
	Outcome (optional)
	Outcome (optional)
Course Name and Code (required)	**Outcome** (required)
	Outcome (optional)
	Outcome (optional)
Course Name and Code (optional)	**Outcome** (required if this additional course is connected to the project course)
	Outcome (optional)
	Outcome (optional)
Course Name and Code (optional)	**Outcome** (required if this additional course is connected to the project course)
	Outcome (optional)
	Outcome (optional)
Course Name and Code (optional)	**Outcome** (required if this additional course is connected to the project course)
	Outcome (optional)
	Outcome (optional)

What will be accomplished by linking these outcomes in this project?

Click and type response.

Why were these courses and key outcomes chosen?

Click and type response.

Introductory, Intermediate and Advanced CTS Project Course Rubric

(Assessment of Outcomes 1–5)

Student Name: _____ Teacher: _____

Name of Project: _____ Start Date: _____

Finish Date: _____

Criteria	Excellent	Proficient	Adequate	Limited	Insufficient
Identify the connection between the project course and two or more CTS courses (1.1, 1.2) (4.1, 4.3)	Significantly contribute to identifying prior CTS outcomes connected to project. Give an insightful explanation of how prior CTS knowledge, skills and attitudes connect with the project course.	Contribute to identifying prior CTS outcomes connected to project. Give a relevant explanation of how prior CTS knowledge, skills and attitudes connect with the project course.	Somewhat contribute to identifying prior CTS outcomes connected to project. Give a reasonable explanation of how prior CTS knowledge, skills and attitudes connect with the project course.	Listen while others contribute to identifying prior CTS outcomes connected to project. Need others to explain details of how prior CTS knowledge, skills and attitudes connect with the project course.	Has not yet provided evidence.
Propose the project and/or performance (2.1, 2.2, 2.3, 2.4) (4.1, 4.2, 4.3)	Outline proposal collaboratively with teacher. Take a leading role in the development of proposal; e.g., • prepare detailed work plan that includes purpose, deliverables, timelines, terms and resources • identify health and safety standards • define assessment standards (indicators of success) • obtain approval.	Review proposal by teacher. Take a role in the development of proposal; e.g., • prepare detailed work plan that includes purpose, deliverables, timelines, terms and resources • identify health and safety standards • define assessment standards (indicators of success) • obtain approval.	Review proposal by teacher. Take a minimal role in the development of proposal; e.g., • prepare detailed work plan that includes purpose, deliverables, timelines, terms and resources • identify health and safety standards • define assessment standards (indicators of success) • obtain approval.	Review proposal by teacher. Listen while others work on the development of proposal; e.g., • prepare detailed work plan that includes purpose, deliverables, timelines, terms and resources • identify health and safety standards • define assessment standards (indicators of success) • obtain approval.	Has not yet provided evidence.
Complete project and/or performance as outlined* (3.1) (4.1, 4.2, 4.3)	Demonstrate passion and dedication to complete project, as outlined. Skillfully demonstrate the ability to apply and model leadership skills to solve problems, make decisions and complete tasks as planned.	Demonstrate initiative to complete project, as outlined. Competently demonstrate the ability to apply leadership skills to solve problems, make decisions and complete tasks as planned.	Demonstrate a willingness to complete project, as outlined. Satisfactorily demonstrate the ability to apply skills to solve problems, make decisions and complete tasks as planned.	Work, with constant supervision, toward completion of the project, as outlined. Often need help to demonstrate the ability to apply skills to solve problems, make decisions and complete tasks as planned.	Has not yet provided evidence.

*****To add more detail, share examples of how this criterion was met on the back or on a separate sheet.

Introductory, Intermediate and Advanced CTS Project Course Rubric (continued)

Criteria	Excellent	Proficient	Adequate	Limited	Insufficient
Comply with safety standards and monitor performance during project* (2.2) (3.2) (4.1, 4.2, 4.3)	Transfer and apply health and safety standards to all working environments throughout the project. Effectively monitor progress and make significant adjustments for improvement. Ask insightful questions when necessary. Consistently adhere to planned deadlines.	Apply health and safety standards to all working environments throughout the project. Somewhat effectively monitor progress and make appropriate adjustments for improvement. Ask relevant questions when necessary. Usually adhere to planned deadlines.	Apply, with assistance, health and safety standards to all working environments throughout the project. Follow the lead of others to monitor progress and make adjustments for improvement. Ask reasonable questions when necessary. Sometimes adhere to planned deadlines.	Apply, with constant supervision, health and safety standards to all working environments throughout the project. Need the support of the teacher to monitor progress and make adjustments for improvement. Need to ask questions when necessary. Rarely adhere to planned deadlines.	Has not yet provided evidence.
Present project and/or performance (3.3) (4.1, 4.2, 4.3)	Share a wide variety of personal experiences related to achieved outcomes and their relationship to original goals.	Share some personal experiences related to achieved outcomes and their relationship to original goals.	Share a personal experience related to an achieved outcome and its relationship to original goals.	Need help to share a personal experience related to an achieved outcome and its relationship to original goals.	Has not yet provided evidence.
Evaluate project and/or performance* (3.4) (4.1, 4.2, 4.3)	Use rubrics, exemplars and feedback effectively to examine processes and strategies. Make significant recommendations for improvement.	Use rubrics, exemplars and feedback somewhat effectively to examine processes and strategies. Make relevant recommendations for improvement.	Use rubrics, exemplars and feedback adequately to examine processes and strategies. Make predictable recommendations for improvement.	Need help to use rubrics, exemplars and feedback to examine processes and strategies. Use the ideas of others to make recommendations for improvement.	Has not yet provided evidence of this performance outcome.
Complete career outcome as identified in course* (4.1, 4.2) (5.1, 5.2)	Refine career pathway plan. Identify significant connections between career and personal values and goals.	Update career pathway plan. Identify more connections between career and personal values and goals.	Review career pathway plan. Identify a few connections between career and personal values and goals.	Review career pathway plan. With help be able to identify a few connections between career and personal values and goals.	Has not yet provided evidence.
Comments:					

*****To add more detail, share examples of how this criterion was met on the back or on a separate sheet.

APPENDIX L: CTS INTERMEDIATE PRACTICUM TEMPLATE

This template can be used by a teacher to assist in planning for an intermediate practicum course from the CTS program of studies.

An intermediate CTS practicum course, which may be delivered on- or off-campus, should be accessed only by students continuing to work toward attaining a recognized credential(s) or an articulation offered by an external organization. The intermediate practicum course must be connected to at least one CTS course from the same occupational area and cannot be used in conjunction with any advanced (3XXX) level course. A practicum course cannot be delivered as a stand-alone course, combined with a CTS project course or used in conjunction with the **Registered Apprenticeship Program** or the **Green Certificate Program**.

Note: The student's timetable or transcript must show evidence of the course(s) required for the credential(s) or articulation.

Student Name:
Click and type student name.

Student ID Number:
Click and type student ID number.

Teacher Name:
Click and type teacher name.

Practicum Course:
Click and type practicum course.

Credentialing/Articulating Agency:
Click and type credentialing/articulation agency.

Credential/Articulation Working Toward:
Click and type credential/articulation working toward.

CTS course connection(s) and the year the credit(s) was or will be awarded. Expand the table below, as needed, by adding new rows.

CTS course(s) (minimum 1) Introductory/intermediate course(s) that this practicum course connects with.	**When the credit(s) was or will be awarded**	**Occupational Area(s)** One must be from the same occupational area as this practicum course.
CTS Course (required**)**	**When the credit(s) was or will be awarded (mm–yyyy)**	**Same occupational area as this practicum course**
CTS Course (optional**)**	**When the credit(s) was or will be awarded (mm–yyyy)**	**Occupational Area**
CTS Course (optional**)**	**When the credit(s) was or will be awarded (mm–yyyy)**	**Occupational Area**

Identify the skill(s)/outcome(s) from the CTS course(s) that the student needs to become more proficient in.
Click here to enter text.

Identify the additional skill(s)/outcome(s) required by the credentialling or articulating organization that the student still needs to demonstrate. (Required only if additional skill(s)/outcome(s) need to be learned.)
Click here to enter text.

Intermediate and Advanced CTS Practicum Course Rubric

(Assessment of Outcomes 1–4)

Student Name: _____ Start Date: _____

Finish Date: _____

Name of Organization Granting Certification: _____

Criteria	Excellent	Proficient	Adequate	Limited	Insufficient
Identify and describe roles, responsibilities and assigned tasks (1.1, 1.2, 1.3) (3.1, 3.2, 3.3)	Identifies regulations and regulatory bodies related to credential(s) or articulation. Gives a comprehensive description of roles and responsibilities. Categorizes personal work responsibilities; e.g., routine tasks vs. nonroutine, tasks requiring personal judgement vs. approval of supervisor.	Identifies regulations and regulatory bodies related to credential(s) or articulation. Gives a thorough description of roles and responsibilities. Categorizes most personal work responsibilities; e.g., routine tasks vs. nonroutine, tasks requiring personal judgement vs. approval of supervisor.	Identifies some regulations and regulatory bodies related to credential(s) or articulation. Gives a partial description of roles and responsibilities. Categorizes some personal work responsibilities; e.g., routine tasks vs. nonroutine, tasks requiring personal judgement vs. approval of supervisor.	Needs help to identify regulations and regulatory bodies related to credential(s) or articulation. Needs help to describe roles and responsibilities. Needs help to categorize personal work responsibilities; e.g., routine tasks vs. nonroutine, tasks requiring personal judgement vs. approval of supervisor.	Has not yet provided evidence.
Demonstrate basic employability skills and perform assigned tasks and responsibilities* (1.4) (3.1, 3.2, 3.3)	Demonstrates passion and dedication to complete credential or articulation. Skillfully demonstrates the ability to apply and model leadership skills to solve problems, make decisions and complete tasks on own and with others. Exceeds the standard.	Demonstrates initiative to complete credential or articulation. Competently demonstrates the ability to apply leadership skills to solve problems, make decisions and complete tasks on own and with others. Meets the standard.	Demonstrates willingness to complete credential or articulation. Satisfactorily demonstrates the ability to apply skills to solve problems, make decisions and complete tasks on own and with others. Meets the standard with some assistance.	With constant supervision works toward completion of the credential or articulation. With help of others demonstrates the ability to apply skills to solve problems, make decisions and complete tasks on own and with others. Working toward meeting the standard.	Has not yet provided evidence.
Analyze the application of prior learning in related CTS courses* (2.1) (3.1, 3.2, 3.3)	Consistently demonstrates fundamental skills to: • communicate • manage information • use numbers • think and solve problems. Skillfully demonstrates the ability to apply and adapt prior knowledge, skills and attitudes to new situations.	Frequently demonstrates fundamental skills to: • communicate • manage information • use numbers • think and solve problems. Competently demonstrates the ability to apply prior knowledge, skills and attitudes to new situations.	Sometimes demonstrates fundamental skills to: • communicate • manage information • use numbers • think and solve problems. Satisfactorily demonstrates the ability to apply prior knowledge, skills and attitudes to new situations.	Rarely demonstrates fundamental skills to: • communicate • manage information • use numbers • think and solve problems. Often needs help to apply knowledge, skills and attitudes to new situations.	Has not yet provided evidence.

*****To add more detail, share examples of how this criterion was met on the back or on a separate sheet.

Intermediate and Advanced CTS Practicum Course Rubric (continued)

Criteria	Excellent	Proficient	Adequate	Limited	Insufficient
Evaluate personal performance to work standards (2.2) (3.1, 3.2, 3.3)	Effectively uses rubrics, exemplars, feedback and other assessment tools related to work standards to examine the quality and productivity of own performance.	Somewhat effectively uses rubrics, exemplars, feedback and other assessment tools related to work standards to examine the quality and productivity of own performance.	Needs some help to use rubrics, exemplars, feedback and other assessment tools related to work standards to examine the quality and productivity of own performance.	Needs help to use rubrics, exemplars, feedback and other assessment tools related to work standards to examine the quality and productivity of own performance.	Has not yet provided evidence.
Evaluate adherence to workplace legislation related to health and safety (2.3) (3.1, 3.2, 3.3)	Uses a wide variety of examples to demonstrate compliance with workplace legislation related to health and safety.	Uses some examples to demonstrate compliance with workplace legislation related to health and safety.	Uses an example to demonstrate compliance with workplace legislation related to health and safety.	Identifies an example of working safely, but needs help to show compliance with workplace legislation related to health and safety.	Has not yet provided evidence.
Evaluate performance requirements of a particular occupation (2.4) (3.1, 3.2, 3.3)	Gathers accurate and current data using a variety of research strategies. Examines data and draws insightful conclusions regarding the importance of: • training and certification • interpersonal skills • technical skills • ethics to performance requirements.	Gathers accurate and current data using identified key resources. Examines data and draws general conclusions regarding the importance of: • training and certification • interpersonal skills • technical skills • ethics to performance requirements.	With assistance gathers accurate and current data using some identified resources. With assistance examines data and draws some basic conclusions regarding the importance of: • training and certification • interpersonal skills • technical skills • ethics to performance requirements.	With supervision gathers accurate and current data using some identified resources. Needs help to examine data and draw conclusions regarding the importance of: • training and certification • interpersonal skills • technical skills • ethics to performance requirements.	Has not yet provided evidence.
Complete career outcome as identified in course* (5.1, 5.2) (4.1, 4.2)	Refines career pathway plan. Identifies significant connections between career and personal values and goals.	Updates career pathway plan. Identifies more connections between career and personal values and goals.	Reviews career pathway plan. Identifies a few connections between career and personal values and goals.	Reviews career pathway plan. With help is able to identify a few connections between career and personal values and goals.	Has not yet provided evidence.
Comments:					

*****To add more detail, share examples of how this criterion was met on the back or on a separate sheet.

APPENDIX M: CTS ADVANCED PRACTICUM TEMPLATE

This template can be used by a teacher to assist in planning for an advanced practicum course from the CTS program of studies.

An advanced CTS practicum course, which may be delivered on- or off-campus, should be accessed only by students continuing to work toward attaining a recognized credential(s) or an articulation offered by an external organization. The advanced practicum course must be connected to at least one CTS course from the same occupational area and cannot be used in conjunction with any introductory (1XXX) level course. A practicum course cannot be delivered as a stand-alone course, combined with a CTS project course or used in conjunction with the **Registered Apprenticeship Program** or the **Green Certificate Program**.

Note: The student's timetable or transcript must show evidence of the course(s) required for the credential(s) or articulation.

Student Name:
Click and type student name.

Student ID Number:
Click and type student ID number.

Teacher Name:
Click and type teacher name.

Practicum Course:
Click and type practicum course.

Credentialing/Articulating Agency:
Click and type credentialing/articulating agency.

Credential/Articulation Working Toward:
Click and type credential/articulation working toward.

CTS course connection(s) and the year the credit(s) was or will be awarded. Expand the table below, as needed, by adding new rows.

CTS course(s) (minimum 1) Intermediate/advanced course(s) that this practicum course connects with.	**When the credit(s) was or will be awarded**	**Occupational Area(s)** One must be from the same occupational area as this practicum course.
CTS Course (required**)**	**When the credit(s) was or will be awarded (mm–yyyy)**	**Same occupational area as this practicum course**
CTS Course (optional**)**	**When the credit(s) was or will be awarded (mm–yyyy)**	**Occupational Area**
CTS Course (optional**)**	**When the credit(s) was or will be awarded (mm–yyyy)**	**Occupational Area**

Identify the skill(s)/outcome(s) from the CTS course(s) that the student needs to become more proficient in.
Click here to enter text.

Identify the additional skill(s)/outcome(s) required by the credentialling or articulating organization that the student still needs to demonstrate. (Required only if additional skill(s)/outcome(s) need to be learned.)
Click here to enter text.

Intermediate and Advanced CTS Practicum Course Rubric

(Assessment of Outcomes 1–4)

Student Name: _____ Start Date: _____

Finish Date: _____

Name of Organization Granting Certification: _____

Criteria	Excellent	Proficient	Adequate	Limited	Insufficient
Identify and describe roles, responsibilities and assigned tasks (1.1, 1.2, 1.3) (3.1, 3.2, 3.3)	Identifies regulations and regulatory bodies related to credential(s) or articulation. Gives a comprehensive description of roles and responsibilities. Categorizes personal work responsibilities; e.g., routine tasks vs. nonroutine, tasks requiring personal judgement vs. approval of supervisor.	Identifies regulations and regulatory bodies related to credential(s) or articulation. Gives a thorough description of roles and responsibilities. Categorizes most personal work responsibilities; e.g., routine tasks vs. nonroutine, tasks requiring personal judgement vs. approval of supervisor.	Identifies some regulations and regulatory bodies related to credential(s) or articulation. Gives a partial description of roles and responsibilities. Categorizes some personal work responsibilities; e.g., routine tasks vs. nonroutine, tasks requiring personal judgement vs. approval of supervisor.	Needs help to identify regulations and regulatory bodies related to credential(s) or articulation. Needs help to describe roles and responsibilities. Needs help to categorize personal work responsibilities; e.g., routine tasks vs. nonroutine, tasks requiring personal judgement vs. approval of supervisor.	Has not yet provided evidence.
Demonstrate basic employability skills and perform assigned tasks and responsibilities* (1.4) (3.1, 3.2, 3.3)	Demonstrates passion and dedication to complete credential or articulation. Skillfully demonstrates the ability to apply and model leadership skills to solve problems, make decisions and complete tasks on own and with others. Exceeds the standard.	Demonstrates initiative to complete credential or articulation. Competently demonstrates the ability to apply leadership skills to solve problems, make decisions and complete tasks on own and with others. Meets the standard.	Demonstrates willingness to complete credential or articulation. Satisfactorily demonstrates the ability to apply skills to solve problems, make decisions and complete tasks on own and with others. With some assistance meets the standard.	With constant supervision works toward completion of the credential or articulation. With help of others demonstrates the ability to apply skills to solve problems, make decisions and complete tasks on own and with others. Working toward meeting the standard.	Has not yet provided evidence.
Analyze the application of prior learning in related CTS courses* (2.1) (3.1, 3.2, 3.3)	Consistently demonstrates fundamental skills to: • communicate • manage information • use numbers • think and solve problems. Skillfully demonstrates the ability to apply and adapt prior knowledge, skills and attitudes to new situations.	Frequently demonstrates fundamental skills to: • communicate • manage information • use numbers • think and solve problems. Competently demonstrates the ability to apply prior knowledge, skills and attitudes to new situations.	Sometimes demonstrates fundamental skills to: • communicate • manage information • use numbers • think and solve problems. Satisfactorily demonstrates the ability to apply prior knowledge, skills and attitudes to new situations.	Rarely demonstrates fundamental skills to: • communicate • manage information • use numbers • think and solve problems. Often needs help to apply knowledge, skills and attitudes to new situations.	Has not yet provided evidence.

*****To add more detail, share examples of how this criterion was met on the back or on a separate sheet.

Intermediate and Advanced CTS Practicum Course Rubric (continued)

Criteria	Excellent	Proficient	Adequate	Limited	Insufficient
Evaluate personal performance to work standards (2.2) (3.1, 3.2, 3.3)	Effectively uses rubrics, exemplars, feedback and other assessment tools related to work standards to examine the quality and productivity of own performance.	Somewhat effectively uses rubrics, exemplars, feedback and other assessment tools related to work standards to examine the quality and productivity of own performance.	Needs some help to use rubrics, exemplars, feedback and other assessment tools related to work standards to examine the quality and productivity of own performance.	Needs help to use rubrics, exemplars, feedback and other assessment tools related to work standards to examine the quality and productivity of own performance.	Has not yet provided evidence.
Evaluate adherence to workplace legislation related to health and safety (2.3) (3.1, 3.2, 3.3)	Uses a wide variety of examples to demonstrate compliance with workplace legislation related to health and safety.	Uses some examples to demonstrate compliance with workplace legislation related to health and safety.	Uses an example to demonstrate compliance with workplace legislation related to health and safety.	Identifies an example of working safely, but needs help to show compliance with workplace legislation related to health and safety.	Has not yet provided evidence.
Evaluate performance requirements of a particular occupation (2.4) (3.1, 3.2, 3.3)	Gathers accurate and current data using a variety of research strategies. Examines data and draws insightful conclusions regarding the importance of: • training and certification • interpersonal skills • technical skills • ethics to performance requirements.	Gathers accurate and current data using identified key resources. Examines data and draws general conclusions regarding the importance of: • training and certification • interpersonal skills • technical skills • ethics to performance requirements.	With assistance gathers accurate and current data using some identified resources. With assistance examines data and draws some basic conclusions regarding the importance of: • training and certification • interpersonal skills • technical skills • ethics to performance requirements.	With supervision gathers accurate and current data using some identified resources. Needs help to examine data and draw conclusions regarding the importance of: • training and certification • interpersonal skills • technical skills • ethics to performance requirements.	Has not yet provided evidence.
Complete career outcome as identified in course* (4.1, 4.2) (5.1, 5.2)	Refines career pathway plan. Identifies significant connections between career and personal values and goals.	Updates career pathway plan. Identifies more connections between career and personal values and goals.	Reviews career pathway plan. Identifies a few connections between career and personal values and goals.	Reviews career pathway plan. With help is able to identify a few connections between career and personal values and goals.	Has not yet provided evidence.
Comments:					

***To add more detail, share examples of how this criterion was met on the back or on a separate sheet.