



Student Guide

The Career and Technology Centre will provide students with access to rigorous academic and technical curriculum in preparation for further education and careers in high-skill, high-demand occupations. The Centre provides industry-standard programs, instruction, facilities and equipment for students seeking industry-standard credentials.

The CTC will provide engaging, innovative and relevant learning opportunities for students through:

- Dual credit and/or pre-placement programs with post secondary institutions. (Pharmacy Technician Retail Certificate, Health Care Aide, Pre-Engineering, Network and Software Certification).
- Credentialed programs with apprenticeship credit (hairstylist apprentice, welder apprentice, culinary apprentice (2012), autobody apprentice).
- Flexible and alternative learning opportunities within, and outside, of the school day, school location and school year.

What are the benefits for students?

- Specific, customized programming for the development of unique abilities.
- Preparation for success in post secondary education, career and lifelong learning.
- Opportunities to achieve industry recognized credentials with access to industry standard facilities and related professional staff.
- Collaboration with business, industry, labour, post secondary education and the community.
- Complementary skill set for many post secondary degree programs.

What do students need to be successful in a program at the CTC?

Students attending programs at the CTC;

- are very motivated to succeed
- have the necessary prerequisites for the selected program
- are seeking an industry recognized credential
- are seeking a detailed, rigorous program that can be customized based on their choices
- are willing to travel to the Career and Technology Centre as part of the regular school day and beyond
- are able to work collaboratively with their instructors and teachers to customize their course delivery and planning

Programs Available at the Career and Technology Centre

Note: Additional Courses to those presented below will be available in the fall of 2011. See the CTC website for the most current program details and availability.

PRE-ENGINEERING

Pre-engineering is a dynamic, state-of-the-art program that provides students with a practical hands-on experience in an interactive technical lab environment complimented with virtual, online simulations. Students will work with robotic, pneumatic, electrical, wind, solar, automated and other technologies to apply their knowledge and skills to solve authentic engineering problems in many fields of engineering, such as electrical, mechanical, structural, computer, and environmental. The pre-engineering lab has a full complement of Amatrol and Festo equipment. Students also have access to VEX Robotic equipment, 3-dimensional printing/milling and electrolab hardware/software applications.

Pre-Engineering Introductory (10-level credits available: 5)

Students complete a combination of foundational courses and student choice courses based on their area of interest. Courses available at this level include electro assembly, control systems, Algorithms, Programming and electrical fundamentals.

Pre-Engineering Intermediate and Advanced (20/30-level credits available: 10)

Students complete a combination of foundational courses and student choice courses based on their area of interest. Courses available in these levels include robotic programming, climate control systems, product development, security systems, electronic controls, production planning, electro-assembly, motors, microprocessors, robotic vision/kinematics and behaviour as well as various project based components based on student choice. All students, with the guidance of the teacher, develop a self-paced plan of study. At the end of the course, students will complete a culminating project which will combine many areas of engineering to solve situational problems.

AUTOBODY

Students enrolled in the Autobody program will practice and develop skills required to identify and demonstrate knowledge and skills for damage repair, restoration and enhancement of the exterior finishes of a vehicle. Autobody is part of the Mechanics strand of CTS. Auto body includes many aspects and skill sets that are transferable to other trades. These include, but are not limited to, sheet metal forming/finishing, paint preparation, paint spray techniques, automotive knowledge, windshield/glass repair and replacement, detailing/graphics, tool usage and knowledge as it relates to the transportation industry. Hours in class may be applied to apprenticeship training. Students will be encouraged to prepare for, and challenge, the first year apprenticeship theory and practical exams.

Autobody Introductory (10-level credits available: 5)

Students learn about autobody repair products, applications, and the use of hand/air tools. They will be required to repair/prepare and refinish their own automotive panels. Hands-on practical skills and knowledge are emphasized.

Autobody Intermediate (20- level credits available: 10)

Students learn about repair products and their application in the autobody and refinishing industry. Emphasis and credit value are based on individual student learning outcomes that pertain to this subject and its disciplines for today's automobile repair industry.

Autobody Advanced (30-level credits available: 10)

Students will gain further experience in methods, procedures and machine tool technology while working on vehicles. They will be encouraged to actively engage in career planning related to the automobile industry and relevant post-secondary institutions. Students may, upon successful completion of the Autobody Apprenticeship Pathway, choose to write the external articulation exam for first period apprenticeship.

COSMETOLOGY

(Hairstylist Apprenticeship and/or Esthetics)

The cosmetology and esthetics program will introduce students to careers related to personal grooming in various life situations, as well as the knowledge and skills required to maintain a personal health and safety. Practical and theoretical knowledge will be learned in a dynamic, client based, full service salon. Cosmetology is an excellent introduction to many careers that include, hairstylist, esthetician, make-up artist, nail technician, massage therapist, tattoo or body piercing artist, sales representative, educator, teaching assistant, platform artist, salon/spa owner and entrepreneur.

More detailed information on this program can be found at Alberta Education.

Cosmetology Curriculum

(<http://education.alberta.ca/media/2205481/cos.pdf>)

COS and HSA Course Summaries

(http://education.alberta.ca/media/1074935/cos_sum.pdf)

Hairstylist Apprenticeship (HSA)

(<http://education.alberta.ca/media/1179157/hsa.pdf>)

Hairstylist Apprenticeship Form

(http://education.alberta.ca/media/1179153/hair_form.pdf)

Esthetics (EST)

(<http://education.alberta.ca/media/2205506/est.pdf>)

EST Course Summaries

(http://education.alberta.ca/media/1179173/est_sum.pdf)

Cosmetology Introductory (10-level credits available: 5-10)

Students develop an increased appreciation for the significance of personal grooming in various life situations, as well as the knowledge and skills required to perform basic grooming practices. Students will nurture a more positive self-concept as they assume increasingly complex roles and responsibilities related to the trade. Students may choose to earn a combination of credits in both Hairstyling and/or Esthetics.

Cosmetology Intermediate (20-level credits available: 10)

Students at this level must dedicate their studies in Cosmetology to their specified areas of study. They may enrol in either Esthetics/Spa or the Hairstyling Apprenticeship Program. They will begin to develop their customer service base accordingly. The intermediate courses provides a broader perspective, helping students perform client services in all areas of their cosmetology program. There is a fee for some materials required at this level.

Cosmetology Advanced (30-level credits available: 10)

Students will expand their skills required for Hairstyling and/or Esthetics. Through customer services the student is given the opportunity to practice advanced techniques and gain the confidence needed for working with clients. In addition to hairstyling, students perform other services of a cosmetologist, which include manicures, make-up application, facials and facial hair removal.

Esthetics students completing courses at this level will have the skills required to begin their entry level employment as an Esthetician, nail technician or make-up artist in Alberta. Students should be prepared to complete further training in their areas of interest to advance/refine skills and to remain current with industry standards/employer recognized credentials.

The Hairstylist Apprenticeship Program at the CT Center

The Hairstylist Program of Cosmetology provides the student with an opportunity to pursue a career in the professional beauty industry and become a Journeyman Hairstylist. This credentialed pathway will provide students with an opportunity to achieve industry credentials and/or articulations. These pathways have been validated to align with post secondary and industry standards. For students to obtain the desired credential/articulation all specified course outcomes must be met.

Upon graduation from high school and with the support of an employer the individual may then enter into the post secondary apprenticeship program as a first period apprentice with advanced standing. Some students start their apprenticeship program while still in high school. Students, with the support of an employer, may challenge the practical and theory exams for their certification.

WELDING (FABRICATION)

Fabrication, or welding, is the study of metal technologies where students learn the fine art of design and metal fabrication. Students enrolled in the Welder Apprentice courses will learn the basic knowledge and skills related to the unique techniques of oxy-fuel welding, gas metal arc welding, flux core arc welding, submerged arc welding, shielded metal arc welding, and will work to refine competency in OAW cutting, GMAW, FCAW, SMAW. The apprenticeship pathway welding is emphasized with the instruction of techniques designed to prepare students to challenge the first year apprenticeship theory and practical exams.

Fabrication Introductory (10-level credits available: 5-10)

Students are introduced to the metal trades. Students are actively engaged in a welding shop learning basic skills, safety and competencies. These skills are used in the production of small projects designed to meet curriculum standards.

Fabrication Intermediate (20-level credits available: 10)

Students spend time perfecting hand skills and gaining theoretical knowledge that apply to a variety of weld tests and practical projects.

Fabrication Advanced (30-level credits available: 10)

Students will be engaged in a rigorous practical and theoretical program designed to prepare them to challenge the first period apprenticeship exams.

More detailed information is available at the following websites.

FAB and WDA Course Summaries

(http://education.alberta.ca/media/1074923/fab_sum.pdf)

Welder Apprenticeship (WDA)

(http://education.alberta.ca/media/941988/fab_wda.pdf)

Students begin to learn their skills as a Welder and upon successful completion of the Welder Apprenticeship Pathway may choose to write the external articulation exam for first period apprenticeship.

Welder Trade Form

(http://education.alberta.ca/media/1114540/cts_welder.pdf)