

## EDMONTON PUBLIC SCHOOLS

November 12, 2002

TO: Board of Trustees

FROM: A. McBeath, Superintendent of Schools

SUBJECT: Career-Focused Education: State of Development and Implementation

ORIGINATOR: B. Holt, Executive Director

RESOURCE

STAFF: Jan Anderson, Gloria Chalmers, Bruce Coggles, David Fraser, Carol Suddards, Stuart Wachowicz, Stephen Wright

### RECOMMENDATION

That the district model and position of a comprehensive strategy for school to work transition described as **Career-Focused Education** be approved.

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#### **Purpose and Rationale of Career-Focused Education:**

Over the past several years, the district has engaged in research and discussion with internal and external stakeholders targeted at developing and implementing a model for career-focused education that involves all students. This model would recognize the role of public education to develop a well rounded person and at the same time be cognizant of the needs of business, industry, and post-secondary institutions and, perhaps above all, the reality of student behaviours. All students leaving high school need clear ideas regarding career options to avoid losing up to 10 years before identifying a productive career path.

The career-focused education model being proposed is grounded in a Graduate Profile (Appendix I) that assumes all students will be citizens and have careers. Consequently, all students will require a certain level of proficiency in literacy, numeracy, cultural literacy, natural philosophy, healthy living and can benefit from a second language, provided within a character education framework. It recognizes that the level of proficiency required in each of those areas varies according to career paths and therefore can accommodate for a range of student cognitive ability and motivation. It also underscores that level of proficiency can be increased throughout one's lifetime. The kindergarten to grade 12 system is only one component, within a continuum of lifelong learning opportunities, provided through the Campus Alberta Framework.

Within this context, the role of the kindergarten to grade 12 system is to ensure that:

- all students receive a broad general education that serves as a foundation for all careers
- all students are informed about career options and their aptitudes and interests
- all students have a sense of their level of proficiency as it relates to work place essential skills, and
- for all students who desire, there are career-related courses and a range of work place learning opportunities.

While the district recognizes that to fully realize such a vision may be beyond the scope of the district alone, it provides direction for the district, enabling identification of next steps. As well, it clarifies the district's direction in its discussions with Alberta Learning, post-secondary, labour, business and industry.

Preliminary discussions with the apprenticeship board, Careers: The Next Generation and industry groups have been positive. This approach, as identified in the Graduate Profile and known as Career-Focused Education (Appendix II), is consistent with the province's direction as described in the *Campus Alberta – A Policy Framework* document released in April 2002 and the *Final Report of the MLA Committee on Lifelong Learning* released in May 2002.

### **Current State of Development and Implementation:**

The district currently is working on several fronts to implement aspects of this model. Work completed and in progress is identified in the project plan and timeline (Appendix III).

#### **A. Foundational Components include:**

- Development of a Graduate Profile
- Development of a **Career Focused Education** framework to assist students in both planning and preparing for post secondary training or employment, all the while aware of post secondary entrance requirements for technical and university education.
  - The model as presented is intended to allow students the opportunity to become familiar with a range of career options and to identify pathways of interest. Along the pathway students can take, in addition to their core studies, courses and work experience or career internships related to their pathway. The program is flexible enough to allow some migration between pathways.
  - Advisory bodies, composed of representatives from business, industry, labour, post-secondary institutions, Alberta Apprenticeship and from Alberta Learning, can guide the development of profile requirements specific to a professional, technical or direct entry occupation within each pathway. The partnership opens the door for teachers and students to interact with and learn from practicing experts in a given route.
  - The model will assist at-risk students by improving the number of work related placements, and also allowing the placement of students full or part time positions while still allowing them to receive instruction in one or more subject areas.
- A central staff position, of 0.5 FTE has been created and filled for the purpose of facilitating growth and quality of the Career Focused Education programs for the district.
- Piloting the Test of Workplace Essential Skills (TOWES).
  - The district is currently piloting (in Metro Community College and at Jasper Place High School), in partnership with Bow Valley College and Human Resources Development Canada (HRDC), a new instrument to help students identify their current level of reading, comprehension and numeracy skills, as they relate to the needs of more than 150 occupations. The tool, if successful, will enable students to discern areas of strength as well as areas that need improvement to pursue a given career. The pilot will be complete by June 2004.

#### **B. Specific Components currently underway include:**

- Implementation of Standards for the Registered Apprenticeship Program (RAP) (Appendix IV).
  - As individual high schools begin to offer their own RAP programs, rather than providing RAP through one school, namely Metro Community College, the need for district standards are crucial to continue the highly successful program. These standards include a timeline to describe the support that schools will provide to students, as well as rigorous safety training requirements.
- Implementation of Standards for the Technical Preparation Program (Tech Prep) (Appendix V).
  - Components of the Tech Prep program currently exist in our high schools, but beyond these components, a Tech Prep school must have a culture of career-focused education rooted in all of its activities. The requirements for the Tech Prep credential are already set for any student in Alberta, but the standards describe characteristics present in a successful Tech Prep school.
- Development of **Pathway Advisory Bodies** composed of representatives of post-secondary, labour, business and industry to assist with this work
- Identification of workplace opportunities and required supports for students in Integrated Occupational Program (IOP).
- Collaboration with external partners to support initiatives for Aboriginal apprenticeships
  - Initiatives from Careers: The Next Generation and other opportunities for increasing Aboriginal participation in RAP will be enhanced through the model.
- Information sharing and inservicing of EPS principals and teachers:
  - This will serve to communicate the range of opportunities that schools will be able to access in terms of support and expertise, and provide ways in which a school can capitalize on its present strengths.
- Development of safety standards that answer due diligence of off-campus education experiences. The development of clear and concise safety standards and requirements are essential to allow the district to comply with new Occupational Health and Safety regulations.
- Development of safety policies for Career Technology Studies (CTS) classes (facilities and teacher health and safety competency requirements) to provide safe learning environments and meet the goals of Occupational Health and Safety.
- Development of CTS Scope and Sequence, packaging of courses and development of additional courses as required to ensure all skills are developed.
  - A careful sequencing of CTS courses for each pathway is required and will be accomplished with advice from the appropriate pathway Advisory Board. The program needs to ensure that students have the knowledge and skills that industry and post secondary schools require in order to make smooth transitions. The present configuration of CTS outcomes does not sufficiently prepare students for a number of trade and technology areas.
- Identification of internships for students in professional career options.
- Discussions with the YMCA regarding a pilot of a long term work internship for a non-high school graduates.
- Development of models for 'Centres of Excellence' in technical training (Appendix VI)
- Development and Provision of Trades and Technology Career Fairs.

- In partnership with Skills Canada, the district will provide Trade and Technology Career Fairs for all junior and senior high students on a regular basis. This will be done to ensure students have the opportunity to become more aware of the broad range of career choices available, and learn early the academic and skill requirements that must be met to prepare for a given career.
- Preparation for EPS to host the annual Tech Prep conference in September 2003.

SW:dh

APPENDIX I: Graduate Profile  
APPENDIX II: Career Focused Education  
APPENDIX III: Project Plan and Timeline  
APPENDIX IV: Standards for the Registered Apprenticeship Program  
APPENDIX V: Standards for the Technical Preparation Program  
APPENDIX VI: Model for Centre of Excellence in Communications and Electronics

## PROJECT PLAN AND TIMELINE

Tasks are organized around the following projects:

- Establishment of Graduate Profile for EPS Graduates
- Development of components of Career Focused Education
- Registered Apprenticeship Program (RAP)
- Tech Prep
- Consultation and Reporting (This is not a separate project but permeates all other projects.)

**Establishment of Graduate Profile for EPS Graduates**

<b>Task</b>	<b>Timeline</b>
Review of Graduate Profile model to ensure usability for all students	Nov 03
Creation of sample learning routes to provide concrete examples	April 03
Provide a mechanism for students to understand their current work related skills <ul style="list-style-type: none"> <li>• Review of suitability of Test of Workplace Essential Skills (TOWES) to the Graduate Profile</li> <li>• Piloting TOWES</li> <li>• Interpretation of pilot</li> <li>• Development of roll-out plan for EPS</li> </ul>	Nov 03 Nov 03 April 03 Nov 04
Identification of off-campus career related learning opportunities (see also RAP) <ul style="list-style-type: none"> <li>• Workplace opportunities and required supports for students in Integrated Occupational courses (IOP)</li> <li>• Internships for students in professional career options</li> </ul>	April 03 April 03

**Development of components of Career Focused Education**

<b>Task</b>	<b>Timeline</b>
Review of CTS to create Scope and Sequences <ul style="list-style-type: none"> <li>• Using apprenticeship articulation as framework</li> <li>• Using existing articulation agreements in Alberta</li> <li>• Development of new scope and sequences as required</li> </ul>	April 03 Nov 03 April 04
Implementation of CTS Scope and Sequences <ul style="list-style-type: none"> <li>• Inclusion in pilot schools programming</li> <li>• Adaptation of Scope and Sequences to fit survey program route (3 cr.)</li> <li>• Delivery of all CTS in logical, sequenced packages of courses</li> </ul>	Nov 03 April 04 Nov 04
Creation of a long-term work internship pilot for non-high school graduates <ul style="list-style-type: none"> <li>• Establishment of committee with partner organization, YMCA</li> <li>• Development of pilot project plan</li> <li>• Securing of funding for pilot</li> <li>• Delivery of pilot</li> </ul>	Nov 03 April 04 April 04 Nov 04
Formation of models for 'Centres of Excellence' in technical training <ul style="list-style-type: none"> <li>• Creation of models, e.g. Communications and Electronics model</li> <li>• Distribution of Centres of Excellence in EPS</li> <li>• Piloting of two different Centres of Excellence</li> </ul>	April 03 Nov 03 April 04
Development of safety policies for CTS classes for both the facilities and teacher health and safety competency requirements	April 03
Identification of designated occupation internships for IOP students	

### **Registered Apprenticeship Program (RAP)**

<b>Task</b>	<b>Timeline</b>
Creation of Standards for RAP	Nov 02
Collaboration with external partners to support initiatives for Aboriginal apprenticeships	April 03
Development of safety standards that answer due diligence of off-campus education experiences	April 03

### **Tech Prep**

<b>Task</b>	<b>Timeline</b>
Official membership in Alberta Tech Prep Consortium	Nov 02
Description of EPS Tech Prep for discussion with schools	Nov 02
EPS to host the annual technical preparation conference in September 2003 <ul style="list-style-type: none"> <li>• Preparation</li> <li>• Conference</li> </ul>	April 03 Nov 03

### **Consultation and Reporting (included within each project)**

<b>Task</b>	<b>Timeline</b>
Regular reporting of progress <ul style="list-style-type: none"> <li>• to Board of Trustees every November and April</li> </ul>	Ongoing
Information sharing and inservicing of EPS principals and teachers <ul style="list-style-type: none"> <li>• Career Focused Education</li> <li>• RAP</li> <li>• Tech Prep</li> <li>• Safety</li> <li>• Centres of Excellence</li> <li>• CTS Scope and Sequences</li> <li>• Career Development</li> </ul>	Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing
Trades and Technology Career Fair for students	April 03
Creation of advisory groups of external stakeholders to guide Career Focused Education <ul style="list-style-type: none"> <li>• Generic committee</li> <li>• Specific industry and business related committees (Societies, Sector groups, Accreditation bodies)</li> </ul>	April 03 Nov 03

## STANDARDS FOR THE REGISTERED APPRENTICESHIP PROGRAM (RAP)

Edmonton Public Schools recognizes the tremendous value and potential that the Registered Apprenticeship Program (RAP) offers to district students. It is also recognized the need for RAP to be available to increasing numbers of students. As the program grows it is essential that there be clear standards, to which schools can adhere to ensure the high quality of the EPSB-RAP program can be maintained, and that there be consistency in the program at all district RAP sites.

The standards as outlined below are subject to periodic review, by the Career Focused Education Committee with additional input from high school principals.

1. Career Focused Education Committee

The committee, composed of representatives from high schools and central services will steer the district's trades and technology initiatives, including Tech-Prep, RAP, Alberta Aboriginal Apprenticeship Project, and other vocational training opportunities for IOP. The committee will also invite input and participation from supporting agencies such as Careers: The Next Generation. A representative from the curriculum unit will chair the committee.

2. Inservicing Staff and Administration

Schools that declare themselves RAP sites will ensure that staff, counselors and administration, working with RAP are inserviced periodically on:

- trade requirements
- employability skills
- safety skills
- Occupational Health and WCB policies

1. Parent Information

- Information must be provided by district staff, as well as personnel from Careers: The Next Generation, to parents to ensure informed decisions are made in allowing students to enter RAP. It is mandatory for parents/guardians to attend information sessions.
- Information will:
  - indicate RAP is about career fulfillment more than financial remuneration
  - indicate the need that students must retain a solid set of school courses in the event they discontinue RAP
  - identify the risks associated with RAP, such as economic downturns and reduced placements
  - identify the conditions of a RAP placement and a knowledge of hour requirements, responsibilities and employers wage obligations

1. School Declaration Date

The district designated site for delivering RAP is Metro Community College. If a school wishes to operate as a RAP site apart from Metro they need to declare that to Curriculum and/or Planning by January 30, for commencement in the following September. Schools wishing to cease operation as a RAP site and use Metro for delivery of RAP need to declare that to Curriculum and/or Planning by January 30, for commencement in the following September.

2. Safety Training

Safety training is essential if employers are to accept placements. Safety training must be credible, teacher delivered, and prepare students in WHMIS, First Aid and either CSTS or JSSS program. Some training in harassment in the workplace is also recommended. Teachers delivering safety training must have the knowledge and skills in workplace safety necessary to be considered competent by Occupational Health and WCB. Careful records of safety training courses must be maintained and available at the school including attendance, lesson plans, assessment tools, student marks, etc.

3. Student Selection

All students placed in RAP must be selected through careful screening of RAP applicants. Students must fit this program to be placed. Ensuring proper screening will continue to assure and build employer confidence and the value of RAP. Selection must consider:

- the district profile for RAP students (as authorized by the School to Work Transitions Committee)
- student age vs. success rate in type of placement
- academic record vs. success rate in type of placement
- length of time for placement
- student maturity and readiness for the type of placement

Careers – The Next Generation should be a partner in the interview and selection process. Interviewers require a good knowledge of the trades and authenticity to interview.

1. Marks Reporting

- names of students must be submitted to Alberta Learning, along with the name of the employer each semester
- RAP supervisors are responsible for ensuring the assessment process is objective, fair, transparent, with criteria for assessment clarified and reported to all parties prior to the commencement of the placement
- schools will recognize the need to estimate the number of RAP courses that will be completed in a given semester, and in conjunction with student information, develop a process to reconcile this if a student achieves additional courses
- in the case of RAP courses completed after the Alberta Learning deadline in the first week of August, (or in the case of Health Internship programs,) a report will be completed to indicate:
  - the course was completed in August, and will not be rolled ahead into the next semester
  - that there will be a paper reporting of this course done at the end of August
- all RAP coordinators will keep a record of student involvement in RAP, using the spreadsheet template in the Off-Campus Education Guide available on the Curriculum web site

1. Call Back Sessions

RAP sites will conduct callback sessions to learn from student experiences and to help with tracking and with communicating to parents and students. The feedback and experience will be used by sites to evaluate their program. These will be conducted at the end of each semester and involve all students.



## 2. Timelines

Timelines for periodic information sessions, selection and entry into RAP, as well as supervision, assessment and reporting will be as identified in the following, Registered Apprenticeship Program Timeline, Edmonton Public Schools. Timelines will recognize the following principles:

- entry into RAP will be following the completion of the grade 10 school year
- recruitment will occur in the fall with students entered into the RAP in the spring. Rare exceptions to this rule may be made in certain circumstances

## 1. Supervision

- the School to Work Transitions Committee will authorize a Work Site Inspection checklist, which the RAP coordinator will use to evaluate the potential work site for safety standards. This will be attached to the contract for each placement and a copy sent to Curriculum. Blank forms will be available on the Curriculum web site.
- on site supervision is essential to the success of RAP
- supervision will be allocated on a 12-month basis by the RAP site. *(In Summer or on school holidays, pay for this supervision must be in accordance with the collective agreement (1/200 per day or 1/400 per half day), or a project pay or hourly rate that is approved by the Superintendent of Schools.)*
- while not an absolute number, it is recommended that a supervisor be responsible for not more than 20 RAP students. This will serve to provide adequate time to do regular site visitations, interviews, and to meet the expectations for safety and attendance as per the timeline.
- district regulations will reflect the needs of RAP in Off-Campus Education guidelines.

## 1. Communication with Central Services

Schools will provide copies of documentation regarding student information and safety to ensure due diligence is provided and to ensure accurate information on the status of RAP in EPS.

- inspections of work sites prior to approval must be completed by a teacher competent in health and safety with the originals retained in the school and copies sent to Curriculum prior to placement of a student at the work site
- off campus agreement forms, once signed by all parties, are retained in the school and copies sent to Curriculum when a student enters the program or changes employers
- names of students entering RAP will be provided to Curriculum when a student first enters the process to become a RAP student. (Starts Employability/Safety Courses; starts Work Experience/Career Internship with the intent to continue as an apprentice; or begins first RAP course, whichever comes first.) This will allow the collection of information to improve RAP in EPS including surveying students and parents.

November 12, 2002

**REGISTERED APPRENTICESHIP PROGRAM TIMELINE  
EDMONTON PUBLIC SCHOOLS**

WHEN	WHAT	STANDARDS	PROVIDER	RESOURCES
Student in Grade 9				
December	Inclusion of information on RAP program in High School Registration Guides and Program Booklets		Primary School	<ul style="list-style-type: none"> <li>Curriculum</li> <li>RAP School</li> <li>Careers</li> </ul>
	Visits to Junior High by High schools - 'Road Shows' for grade 9s	Any presentation to be included with high school session	Primary School	<ul style="list-style-type: none"> <li>RAP School</li> <li>Careers</li> </ul>
	High School Information Nights Booth	Provide take away information	RAP School	<ul style="list-style-type: none"> <li>Curriculum</li> <li>Careers</li> </ul>
January	Each high school identifies RAP contact person	No duties assigned, only 'mailing secretary'	All EPS high schools	<ul style="list-style-type: none"> <li>Curriculum</li> </ul>
March/April	RAP information sessions for parents and students Describe in Class calendar In school newsletters (both Jr. and Sr. High) Let staff know through Sups Memo	Similar to IB/AP nights in the district	RAP School	<ul style="list-style-type: none"> <li>Curriculum</li> <li>Careers</li> </ul>
May	Grade 9 student tours of Skills Competitions		Skills Canada - Alberta	<ul style="list-style-type: none"> <li></li> </ul>
Student enters grade 10				<ul style="list-style-type: none"> <li></li> </ul>
	Poster campaign in High Schools			<ul style="list-style-type: none"> <li></li> </ul>
Fall	Initial presentation to grade 10 students describing RAP program with Info Sheet (Key Dates and Contacts) provided to students <ul style="list-style-type: none"> <li>all dates forwarded to Curriculum as soon as scheduled</li> </ul>	Should be in 10 and 13 level classes to ensure all students receive the message	Primary School	<ul style="list-style-type: none"> <li>Curriculum</li> <li>RAP School</li> <li>Careers</li> </ul>
	Applications available on-line			<ul style="list-style-type: none"> <li>Curriculum</li> <li>RAP School</li> <li>Careers</li> </ul>
	Direct mail to students' homes of parent letter by EPS; student letter if RAP School is different than Primary School	Student information is retained by EPS	RAP School	<ul style="list-style-type: none"> <li>Curriculum</li> <li>Careers</li> </ul>
	Interested Student Information Sessions available upon request	Outside class time Provide necessary forms and information	RAP School	<ul style="list-style-type: none"> <li></li> </ul>
	Hard copy of applications and information package sent to RAP coordinator in each school		RAP School	<ul style="list-style-type: none"> <li>Curriculum</li> </ul>

WHEN	WHAT	STANDARDS	PROVIDER	RESOURCES
Feb/March /April	Parent evenings for interested students' parents	District sessions at the Centre for Ed Additional sessions at high schools	RAP School	
March	Student chooses to pursue the RAP program - completes EPS form	With written parent's permission	Student	
April	Student is interviewed	Interview panel should include: -educator not affiliated with the students -industry rep	RAP School	• Careers
	Student selects apprenticeship field on application form	Student must have or be on-track for academic requirements for the chosen trade	Student	
April - June	Student must take Employability Skills course CTR1010 Job Prep CTR1210 Personal Safety CTR2210 Workplace Safety  Reported as Summer School course by Metro	<ul style="list-style-type: none"> <li>• Employee Standards</li> <li>• Resume</li> <li>• Job Prep</li> <li>• WHMIS certificate</li> <li>• Construction Safety Training System</li> <li>• WCB</li> <li>• Emergency First Aid with Heartsaver (Level A) CPR</li> <li>• Optional - Confined Space or Transportation of Dangerous Goods</li> <li>• Teachers delivering safety training must be competent in work place safety.</li> </ul>	RAP School	<ul style="list-style-type: none"> <li>• Industry involvement</li> <li>• Careers</li> </ul>
	Engage employers in creating apprenticeship and internship workplace opportunities		RAP School	• Careers
prior to student placement	Inspection of RAP site, Explanation of Insurance Coverage, WCB reporting to employer	Original documents retained at school, copies of inspections sent to Curriculum prior to placement of a student	RAP School	
April 30	Ensure school has <u>full</u> course selection (or schedule) for following year	RAP students must have the potential for full time school attendance should a work site placement cease	RAP School	
Grade 10 summer	Internship/Work Experience contract signed by parent/student/employer	Supervisor available 5 days a week (8- 4) with emergency contact outside these hrs	RAP School Employer	

WHEN	WHAT	STANDARDS	PROVIDER	RESOURCES
	Supervision of students on work site during summer	Teacher pay 1/200 if school based, Continuing Ed rate if Metro		
Summer	Career Internship	Any student working outside regular school day will have emergency contact number to reach supervisor	RAP School Employer	
	Employer offers to indenture student		Employer RAP School	
	RAP placement - first year of a two year program	Recommended maximum 20 RAP credits per school year (+ 5 Career Internship, first year) Students eligible to work from 7 a.m. to 10 p.m.	Employer RAP School	
	Student and employer completes Apprenticeship Application and contract	Alberta Apprenticeship Contract	Employer Student RAP School	
	RAP verification to Alberta Apprenticeship (\$25 fee)	RAP School takes form to Alberta Apprenticeship	RAP School	
	Work site placements	Holiday schedule for Careers to ensure continuous coverage	RAP School	• Careers
Student enters Grade 11				•
September 1	Ensure school has timetable for academics in semester two for students in RAP semester one or vice-versa		RAP School	•
	Submit report to Alberta Learning to register RAP students		RAP School	•
	Student is enrolled in RAP courses		RAP School	•
	Learning plan finalized		RAP School	•
	Teacher assigns and reports grade of RAP courses as student completes the school term	Emergency contact number provided to student	RAP School	•
	Mid Term report/evaluation mailed to parents, if student under 18 (copy sent to school for student's file)		RAP School	•
August/ Dec / June	Student and parent call back session with program planning		RAP School	•
	Visit to work site by supervising teacher	Once a month including a review for health and safety. Records maintained at school.	RAP School	•
	Communications by student to	Fax reports back – bi-weekly	RAP School	•

WHEN	WHAT	STANDARDS	PROVIDER	RESOURCES
	supervising teacher	or more frequently as required (simple report with spot for teacher's notes) Student may also telephone supervisor when needed Records maintained at the school		
	Communications by supervising teacher to student	As required		•
	Review progress with student at each evaluation point		RAP School	•
	RAP placement continued for second year	Recommended maximum 20 RAP credits per school year 7 a.m. to 10 p.m.	RAP School Careers	•
End of semester	Final Evaluation of student			•
	If student completes 1000 apprenticeship hours Employer is notified that WCB from Alberta Learning ceases RAP Coordinator switches to resource person		RAP School	•
April 30	Ensure school has course selection for following year with RAP scheduled	RAP students must have the potential for full time school attendance should a work site placement cease	RAP School	•
Grade 11 summer	Supervision of students on work site during summer	5 days a week (8 to 4) with emergency contact outside these hours Teacher pay 1/200 for school staff, Continuing Education pay for Metro	RAP School	•
	Work site placements	Holiday schedule for Careers to ensure continuous coverage	RAP School	• Careers
Student enters grade 12				•
September 1	Ensure school has timetable for academics in semester two for students in RAP semester one or vice-versa		RAP School	•
	Student is enrolled in RAP courses		RAP School	•
	Learning plan finalized		RAP School	•
	Teacher assigns and reports grade of RAP courses as student completes first year hours	Emergency contact number provided to student	RAP School	•
	Mid Term report/evaluation mailed to parents, if student under 18 (copy sent to school for		RAP School	

WHEN	WHAT	STANDARDS	PROVIDER	RESOURCES
	student's file)			
	Student and parent call back session		RAP School	
	Visit to work site by supervising teacher	Once a month including a review for health and safety. Records maintained at school.	RAP School	
	Communications by student to supervising teacher	Fax reports back – bi-weekly or more frequently as required (simple report with spot for teacher's notes) Student may also telephone supervisor when needed Records maintained at the school	RAP School	
	Communications by supervising teacher to student	As required		
May	Student may compete in Skills Canada - Alberta competition		RAP School	• Skills Canada - Alberta
	Scholarship information session		RAP School	•
	Student applies for RAP scholarship		RAP School	• Careers
	Review progress with student after 1000 hours		RAP School	
April/May	Submit names of graduating students to Alberta Apprenticeship	Students need to register before transcripts available	RAP School	
	Alberta Apprenticeship takes flag off student file allowing student to take courses	After student has completed 1000 hrs and is on the path to complete H.S	RAP School	
Grade 12 summer	Supervision of students on work site during summer	5 days a week (8 to 4) with emergency contact outside these hours Teacher pay 1/200 for EPS staff, Metro uses Con Ed rates	RAP School	
	Work site placements	Holiday schedule for Careers to ensure continuous coverage		• Careers
	Exit interview offered to students completing the program		RAP School	•
Fall	RAP recognition ceremony may be phased out and incorporated into school ceremonies		RAP School	• Careers

RAP students are eligible for a fourth year in high school if required to complete courses for high school diploma.

## EMPLOYER'S EVALUATION OF STUDENT

STUDENT'S NAME \_\_\_\_\_ DATE \_\_\_\_\_ HOURS \_\_\_\_\_

SCHOOL \_\_\_\_\_ SCHOOL CONTACT \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ FAX: \_\_\_\_\_ EMAIL: \_\_\_\_\_

EVALUATED BY \_\_\_\_\_ TITLE \_\_\_\_\_

BUSINESS \_\_\_\_\_ ADDRESS \_\_\_\_\_

Rate the student by circling the number that best describes this student.  
4 – Outstanding; 3 – Satisfactory; 2 – Fair; 1 – Unsatisfactory

### PERSONAL AND SOCIAL QUALITIES

Ability to meet employer's expectations.	4	3	2	1
Attitude towards job.	4	3	2	1
Works well with others.	4	3	2	1
Accepts advice and criticism.	4	3	2	1
Clean, well-groomed.	4	3	2	1
Suitably attired for the job.	4	3	2	1

COMMENTS

### WORK QUALITIES AND HABITS

Ability to learn job skills.	4	3	2	1
Follows instructions.	4	3	2	1
Accepts responsibility.	4	3	2	1
Follows safety and health regulations.	4	3	2	1
Productivity in performing work.	4	3	2	1
Is punctual.	4	3	2	1
Shows initiative.	4	3	2	1
Interested in learning new skills.	4	3	2	1

COMMENTS

### VOCATIONAL SKILLS

Ability to meet company's work standards.	4	3	2	1
Complete work accurately.	4	3	2	1
Shows proper care for working area.	4	3	2	1
Use of equipment and tools.	4	3	2	1
Care of material and supplies.	4	3	2	1

COMMENTS

### COMMUNICATION SKILLS

Ability to meet employer's expectations.	4	3	2	1
Listens attentively.	4	3	2	1
Works well with others.	4	3	2	1
Speaks clearly.	4	3	2	1
Uses English writing skills well.	4	3	2	1

COMMENTS

ADDITIONAL COMMENTS would be welcome and would benefit the student.

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\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Employer's Signature

.....  
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## WORK STATIONS/WORK SITES INSPECTION CHECKLIST

SCHOOL \_\_\_\_\_ DATE \_\_\_\_\_

ADDRESS \_\_\_\_\_ SCHOOL YEAR \_\_\_\_\_

TEACHER COORDINATOR \_\_\_\_\_

PHONE NO. \_\_\_\_\_ E-MAIL \_\_\_\_\_

1. A work station/work site, the specific off-campus location at which the student is involved in off-campus learning activities (Work Experience/Study, Internship, RAP, etc.), requires inspection and annual approval by the principal. After an accident or injury the work station requires a subsequent inspection before re-approval. (Reference: Off-Campus Education Guide, HAA.AR)

2. Parental or guardian consent shall be obtained on the student's behalf and that a student-employer agreement shall be signed by both parties and the parents of underage students, and that this inspection record shall be on file at the school attended by the student and copies sent before the student is placed at the work site/station.

### WORK STATION/WORK SITE

Company Name: \_\_\_\_\_ Work Site Location (if different from company address)

Company Address \_\_\_\_\_

(as listed in telephone book)

Contact Person \_\_\_\_\_ Supervisor (on site): \_\_\_\_\_

Phone: \_\_\_\_\_ Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_ E-mail: \_\_\_\_\_

Number of students to be placed at work site: \_\_\_\_\_

Work site appropriate for students of ages \_\_\_\_ to \_\_\_\_

Work Station Approval for (Please Check):

Work Experience 15?-25?-35? Career Internship ? IOP ? RAP ? Other \_\_\_\_\_ ?

Inspecting Teacher (Please Print): \_\_\_\_\_

Date: \_\_\_\_\_ SIGNED: \_\_\_\_\_

Inspecting Teacher

Principal (Please Print): \_\_\_\_\_

Date: \_\_\_\_\_ SIGNED: \_\_\_\_\_

Principal

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# **WORK STATIONS/WORK SITES INSPECTION CHECKLIST FOR OFF-CAMPUS EDUCATION**

Name of Company: \_\_\_\_\_

Inspection (Italicized comments provide areas/topic for review.)	Date	Inspecting Teachers Initials
1. Work station/work site visited and inspected. <ul style="list-style-type: none"> <li><i>Company's safety record</i></li> </ul>		
2. Employer/supervisor interviewed. Key questions asked and responded to. <ul style="list-style-type: none"> <li><i>Company's safety program</i></li> <li><i>Employer's awareness of appropriate legislation and policies</i></li> <li><i>"A Worker's Guide to the Occupational Health and Safety Act"</i></li> <li><i>Adequate supervision</i></li> <li><i>Appropriate learning and skill development available</i></li> <li><i>Age appropriate</i></li> <li><i>Employer/supervisor aware and supportive of learning plan</i></li> </ul>		
3. Accident/incident records appear reasonable. <ul style="list-style-type: none"> <li><i>Reporting of student injury process</i></li> </ul>		
4. Hazards of job identified and understood. <ul style="list-style-type: none"> <li><i>Dangers of the job</i></li> <li><i>Hazards the student should be made know about</i></li> </ul>		
5. Safety training provided to new workers. <ul style="list-style-type: none"> <li><i>Training in emergency procedures (e.g. fire, chemical spills, robbery, etc.)</i></li> </ul>		
6. Workers currently on site appear to be wearing appropriate Personal protective equipment (PPE), AND a) PPE provided to student(s), OR b) Student(s) responsible for bringing their own PPE.		
7. Fire extinguishers, first aid kits, exits and safety-related signs and materials are clearly visible.		
8. Proper emergency procedures, including accident-reporting procedures appear to be in place. <ul style="list-style-type: none"> <li><i>Procedures and timelines for reporting a WCB claim for EPS students</i></li> <li><i>First aid trained staff</i></li> </ul>		
9. Work station/work site appears safe and caring for students		

The work station/work site list on the reverse side has been inspected and is approved for student placements.

Signature \_\_\_\_\_ Date \_\_\_\_\_

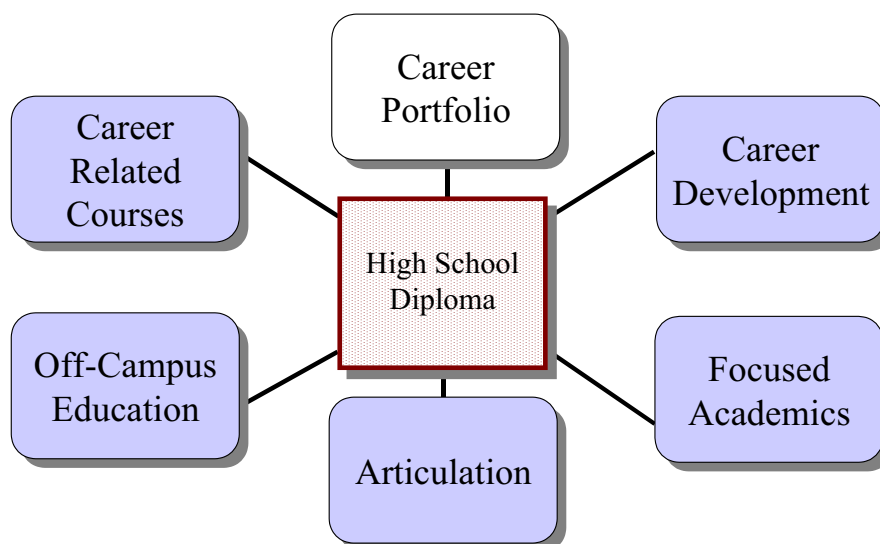
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## STANDARDS FOR “TECH PREP” IN EDMONTON PUBLIC SCHOOLS

Edmonton Public Schools is now a member of the Alberta Tech Prep Consortium and is eligible to recommend the awarding of the Tech Prep credential to students. Schools in Edmonton Public Schools may choose to have students working towards this credential as part of their high school programs. Alberta Learning will now include the Alberta Tech Prep Credential on a student's high school transcript.

**Tech Prep Model**

Each component of Tech Prep is critical to the completing a value-added package and is specifically described by Alberta Tech Prep to ensure high quality standards. A brief overview of each component is included, but schools should have a thorough understanding of the full expectations of each component and its contribution to the package before considering offering the Tech Prep program.

In describing the components of Tech Prep, the term career clusters is used to describe the area of focus chosen by the student. These broad career clusters are used to organize program delivery in Tech Prep:

- Technology, Science and Natural Resources
- Business Services
- Human Services
- Arts

Students may switch their career cluster focus during their high school based on their interests and career goals.

**Focused Academics**

Starting with the requirement of a high school diploma as the minimum standard for all Tech Prep students, math and science requirements are raised to reflect the higher skills needed in these areas to be successful in future studies and careers. The career cluster selected by the student determines the particular courses studied.

First aid, job safety courses and career development courses are also an academic requirement of Tech Prep. These courses will provide the student with the background for career portfolio development and presentation. Comprehensive work site safety training is also required prior to any off-campus learning experience.

#### Career Related Courses

Tech Prep students select a minimum of ten credits from courses within the student's selected career cluster. Ten additional credits in career related courses may be selected from outside the student's chosen career cluster and on the principal's approval can include other high school courses. The majority of these courses will be from the Career and Technology Studies (CTS) program of studies.

Due to the individualized nature of *Project* courses, they are not considered career related credits. CTS career related credits must come from CTS packaged courses providing 25 hours of instruction per credit (62.5 hours for 3 credits). No CTS courses embedded into other will be considered for career related courses.

#### Career Development

Alberta Tech Prep students receive comprehensive career guidance and planning, following the Alberta Learning Comprehensive Career Development System, CCDS. This system provides the following benefits:

- Provide a framework for short and long-term action planning
- Clarify roles and responsibilities of learners, their families, schools and school systems, community partners and government agencies
- Promote the use of a common language
- Improve cost-benefit of resource allocation
- Contribute to lifelong learning
- Help build a sense of community and increased parent and community awareness of the effectiveness of schools

Schools offering Tech Prep will be obvious to a visitor due to the importance placed on career development throughout the entire school. The following are examples of activities occurring at a Tech Prep school.

- Coordination of delivery of classroom presentations on:
  - Career Planning
  - Labour Market Trends
  - Work Search
  - Resume Development
- Monitoring to ensure maintenance of the Alberta Human Resources and Employment “Career Corner” print resources and information.
- Encouraging and arranging tours of the Labour Market Information Center, “LMIC.”
- Coordination of delivery of career development presentations to teachers and parents.

- Creation of “Pick-Up-And-Go” kits on career topics: Safety@Work, Alberta Employment Standards, Moving Out, Funding Post-Secondary, etc. The schools will contribute the kits created at the school to the EPS Tech Prep consortium.
- “Peer Career Coaching”

### Career Portfolio

The purpose of the portfolio is to assist students with career planning and to accentuate the importance of developing employability skills that employers are looking for in employees. For students entering post-secondary, it also serves to influence those institutions which consider factors such as prior learning, attitude and interest when selecting the most suitable applicants. The student will develop and maintain a Career Planning / Employability Skills Portfolio and complete a Graduate Skills Presentation. This is slightly covered in the new CALM program, but needs to be an area of focus for the entire school as the student will be constantly adding and refining the portfolio.

### Off-Campus Education

Off-campus education is focused by the student selected career cluster and consists of a minimum of minimum of 200 hours related to the career cluster. Off-campus opportunities enhance the curriculum by giving students a first-hand look at the skills and attitudes desired by business/industry. It provides students with the opportunity to experience the environment of work and work with specialized equipment, processes and expertise that may not be available at school. The off-campus educational experience also assists with career guidance by helping students to formulate career goals and plans for their future. Students learn what they don’t like, as well as what they do like.

The off-campus experience is a structured learning activity. It requires such pieces as work site inspection, development of a learning plan, ongoing communication and site visits all supervised by a teacher competently inserviced about Tech Prep and job safety.

### Articulation

Since EPS is at the beginning stages of offering Tech Prep to students, the development of articulation of Tech Prep to Edmonton area post-secondary institutes is also beginning. The framework for articulation is just being created and is provided at this time for information.

#### Framework for articulation in EPS Tech Prep

- be applicable for all District schools
- provide meaningful benefits for students  
(see Michigan Articulation Manual)
- not be at the expense of students not in the program (re-word)
- be approved by the Board of Trustees
- be included in EPS and Alberta database of agreements
- should include professional development component for staff
- should include communication plan

### Creation of Tech Prep program in a school

Schools considering offering the Tech Prep program will submit a project plan to Curriculum. This will enable Curriculum to assist schools with delivery of the Tech Prep program. The following starting point is provided as a guide to assist schools considering the Tech Prep program.

1. School Principal and Administration staff meet with Curriculum regarding the following:
  - Understanding of Tech Prep
  - Identifying strengths and weaknesses within the school site
  - Preparation of a plan for information sharing to staff and students
2. Tech Prep presentation to High School Staff by Principal and Curriculum
  - Opportunities for feedback from staff and creation of a description of the Tech Prep program at the school
3. Designation of a staff member as school Tech Prep Coordinator
4. Planning sessions with Tech Prep Coordinator and Curriculum for the organization of courses to align with Tech Prep credential and focussing CTS offerings to provide scope and sequences for career clusters offered in the school
5. Ensuring a high quality Comprehensive Career Development System including the creation of 'Pick-Up-and-Go Kits'
6. Creating the logistics plan for students' career portfolio including development, storage, access and presentation
7. Small scale piloting of components of Tech Prep within the school (e.g. Work experience placements around student selected career cluster, career development inservice for all staff members, inclusion of career presentations in core courses)
8. A school-wide professional development plan is created for all staff to provide the necessary career development and awareness skills and safety training.
9. Tech Prep presentation to Parents/Students outside of the school day. In class Tech Prep presentations to students: focused on Grades 10 and 11 students by targeting CTS courses, 20 level science, work experience classes
10. Request to Board of Trustees for ability to recommend Tech Prep credential

### Edmonton Public Schools - Technology Preparation Credential

Following are the minimum requirements for a Technology Preparation Credential. Students must receive a High School Diploma to be eligible for a Tech Prep Credential.

REQUIREMENTS	CREDITS
<b>High School Diploma</b> (minimum of 100 credits)	
<b>English:</b> 30 or 33 (matches diploma requirements)	15 cr.
<b>Social Studies:</b> 30 or 33 (matches diploma requirement)	15 cr.
<b>Math:</b> 20, Applied or Pure: should relate to Career Cluster (exceeds diploma requirements)	10 cr.
<b>Science:</b> Bio 20, Chem 20 Physics 20, Science 20: should relate to Career Cluster (meets diploma requirements)	10 cr.
<b>Physical Education 10</b> (meets diploma requirements)	3 cr.
<b>Career Development Skills Courses:</b> <ul style="list-style-type: none"> <li>CALM (meets diploma requirements)</li> <li>Career Planning / Employability Skills Portfolio and Graduate Skills Presentation</li> <li>Career Directions Courses – CTR2310, CTR3310 – (Optional)</li> </ul>	3 cr. non credit 2-3 cr.*
<b>Career Related Courses:</b> <ul style="list-style-type: none"> <li>Student will complete a minimum of 10 credits from courses within the Career Cluster selected by the student. Related courses are listed in the table below.</li> <li>Remaining credits may be selected from outside the student's designated Career Cluster, and on the principal's approval may include other high school and locally developed courses</li> </ul>	20 cr.*
<b>Off-Campus Education</b> <ul style="list-style-type: none"> <li>Work Experience, minimum of 200 hours related to the Career Cluster. (includes Military Work Experience, Career Internship, RAP)</li> <li>Job Preparation - CTR1010</li> </ul>	8 cr.* 1 cr.*
<b>Personal and Job Safety Skills:</b> <ul style="list-style-type: none"> <li>Personal Safety Management - CTR 1210</li> <li>First Aid/CPR Training - CMH 2120 Standard First Aid Certificate, including Level A CPR</li> </ul>	1 cr.* 1 cr.*
*courses can be used to meet the diploma requirements of -10 cr. from CTS, Fine Arts, Second Language, Physical Education, IOP, RAP, or locally developed -10 cr. in 30 level courses other than English or Social (e.g. 3000 level CTS, 36 level IOP, and 35 level RAP)	
<b>Information Technology (ICT)</b> – Demonstrated Competencies in word processing, database and spreadsheet	

### CAREER CLUSTERS

Technology, Science and Natural Resources	Business Services	Human Services	Arts
<b>Related Courses:</b> <ul style="list-style-type: none"> <li>Agriculture</li> <li>Communication Technology</li> <li>Construction Technologies</li> <li>Design Studies</li> <li>Electro-Technologies</li> <li>Energy and Mines</li> <li>Fabrication Studies</li> <li>Fashion Studies</li> <li>Forestry</li> <li>Mechanics</li> <li>Wildlife</li> <li>Science related courses</li> </ul>	<b>Related Courses:</b> <ul style="list-style-type: none"> <li>Enterprise and Innovation</li> <li>Financial Management</li> <li>Information Processing</li> <li>Legal Studies</li> <li>Logistics</li> <li>Management and Marketing</li> <li>Tourism Studies</li> </ul>	<b>Related Courses:</b> <ul style="list-style-type: none"> <li>Community Health</li> <li>Cosmetology</li> <li>Foods</li> <li>Phys Ed 30</li> <li>Psychology</li> <li>Sociology</li> <li>Second Language (Higher Level)</li> </ul>	<b>Related Courses:</b> <ul style="list-style-type: none"> <li>Art</li> <li>Communication Technology</li> <li>Construction Technologies</li> <li>Cosmetology Studies</li> <li>Design Studies</li> <li>Drama</li> <li>Fabrication Studies</li> <li>Fashion Studies</li> <li>Music</li> </ul>

**MODEL FOR CENTRE OF EXCELLENCE IN COMMUNICATIONS AND  
ELECTRONICS**

A Centre of Excellence is an identified site that is committed to providing outstanding education in a particular career area. It uses the career area to guide and create a structure to organize the delivery of instruction, including academic and Career and Technology Studies (CTS) courses that develop the students' skills necessary for industry and further study. It allows for the consolidation of district resources and creation of a school culture that supports the focus on careers and career education.

The distribution of Centres with different focused career areas across various high schools would allow students to choose the program that best meets their career goals. Initially, each Centre of Excellence would focus around the articulation agreements in the trades areas such as; Automotives, Carpentry, Electrician, Welding, Cabinetmaking and Electronics. The second set of areas to be developed will be for programs with existing articulation agreements such as; Health, Business Management and Information Technology.

The model for the programming at a Centre of Excellence uses the example area of Communications and Electronics Program. It is designed as a rigorous, focused program that provides graduating students with a strong knowledge and skill base in the communications and electronics field. The program is recognized as meeting both the requirements of an Edmonton Public Schools Tech Prep Credential and allows a student to challenge the theory and practical exams of the first year apprenticeship of Electronic Technician Journeyman.

The program includes academics required to enter post-secondary and career related courses in communications and electronics. The career related courses provide both the theory and practice required in this demanding field. Students are also required to work in simulated and real workplace environments.

The program requires three-years of study to complete. Students are recommended to complete the 3-credit introductory course in the first semester of grade 10 to ensure the program matches the student's interests and abilities prior to committing to the program.

Facilities include a well-equipped electronic lab with the ability to provide customer service work. A regular classroom would also be required on a part time basis. Specific equipment requirements will be determined upon review of eligible school sites. A Journeyman Electronic Technician is necessary to teach the courses in communication and electronics.

### Communication and Electronics Program Requirements

Exit Standard	Required for High School Diploma	Required for EPS Tech Prep Certificate	Required for Electronic Technician Trade Articulation
English 30 or 33	Yes	Yes	Exceeds
Social Studies 30 or 33	Yes	Yes	
Math 20 Pure or Applied	Exceeds	Yes	Meets
Physics 20 (minimum)	Meets	Meets	Yes
Physical Education 10	Yes	Yes	
CALM	Yes	Yes	
Grade 10 Career Related Courses (Technology)			
• Communications and Electronics - Introduction (3 cr)	Meets	Yes	Yes
• Communications and Electronics - Level 1 (5 cr)	Meets	Yes	Yes
Personal and Employability Skills (3 cr)			
• Job Preparation (CTR1010)		Yes	Yes
• Personal Safety (CTR1210)		Yes	
• First Aid/CPR (CMH2120)		Yes	
Grade 11 Career Related Courses (Technology)			
• Communications and Electronics - Level 2 (6 cr)	Meets	Yes	Yes
• Communications and Electronics - Practicum 1 (3 cr)			Yes
• Communications and Electronics - Work Experience 1 (3+ cr)		Yes	Yes
Grade 12 Career Related Courses (Technology)			
• Communications and Electronics - Level 3 (5 cr)	Meets	Yes	Yes
• Communications and Electronics - Practicum 2 (3 cr)			Yes
• Communications and Electronics - Work Experience 2 (5+ cr)	Meets	Yes	Yes
Career Development (3 cr)			
• Portfolio I (CTR2310)			
• Portfolio II (CTR3310) including presentation		Exceeds	
• T.B.D.			



## Sample Learning Plan

The following outlines the required course sequence in the Communications and Electronics program and the complementary courses the student may select from.

Grade 10	Grade 11	Grade 12
Required courses		
English 10-1 or 10-2	English 20-1 or 20-2	English 30-1 or 30-2
Social Studies 10 or 13	Social Studies 20 or 23	Social Studies 30 or 33
Math 10 Pure or Applied	Math 20 Pure or Applied	Math 30 Pure or Applied
Science 10	Physics 20	
	Chemistry 20	Chemistry 30
Physical Education 10 (5 credits)		
Personal and Employability Skills (3 credits)	CALM (3 credits)	Career Development (3 credits)
Communications and Electronics - Introduction Semester 1 (3 credits)		
Communications and Electronics - Level 1 Semester 2 (5 credits)	Communications and Electronics - Level 2 (6 credits)	Communications and Electronics - Level 3 (5 credits)
	Communications and Electronics - Practicum 1 (3 credits)	Communications and Electronics - Practicum 2 (3 credits)
	Communications and Electronics - Work Experience 1 (3+ credits)	Communications and Electronics - Work Experience 2 (5+ credits)
Required Complementary Courses		
One of the following packages: <ul style="list-style-type: none"> <li>Second Language</li> <li>Design Studies and Construction</li> <li>Instrumental Music or Art</li> </ul>	One of the following: <ul style="list-style-type: none"> <li>Physical Education 20</li> <li>Second Language</li> <li>Design Studies and Construction</li> <li>Instrumental Music or Art</li> </ul>	A minimum of one of the following: <ul style="list-style-type: none"> <li>Physical Education 30</li> <li>Physics 30</li> <li>Math 31</li> <li>Second Language</li> <li>Design Studies and Construction</li> <li>Instrumental Music or Art</li> </ul>

## COMMUNICATIONS AND ELECTRONICS COURSE DESCRIPTIONS

### Communications and Electronics - Introduction

3 credit course

**Course MEC1090: Electrical Fundamentals** Students identify and describe the operating principles and applications of electricity.

**Course ELT1010: Electro-assembly 1** Students apply basic fabricating and servicing techniques to construct and test electronic and electromagnetic devices and cables.

**Course ELT1030: Conversion & Distribution** Students experiment and work with principles of electrical energy conversion and distribution.

### Communications and Electronics - Level 1

5 credit course

Journeyman Electronic Technician or Certified Electronic Engineering Technologist required

**Course ELT1050: Electronic Power Supply 1** Students construct different types of alternating and direct current power supplies, and demonstrate their application in electrical/electronic systems.

**Course ELT1080: Control Systems 1** Students construct process control systems, demonstrate their basic operation, and demonstrate procedures for testing them.

**Course ELT1090: Analog Communication 1** Students install and demonstrate the fundamentals of various consumer audio integrated systems.

**Course ELT1100: Electronic Communication** Students demonstrate the fundamentals of video systems, and describe their uses.

**Course ELT1110: Security Systems 1** Students install and demonstrate the fundamentals of sensors, control units and warning devices used in security systems.

### Communications and Electronics - Level 2

6 credit course

Journeyman Electronic Technician or Certified Electronic Engineering Technologist required

**Course ELT2010: Electro-assembly 2** Students apply electro-assembly technology to manufacture circuit boards.

**Course ELT2050: Electronic Power Supply 2** Students construct and demonstrate the fundamentals of electronic power supply technology.

**Course ELT2080: Control Systems 2** Students demonstrate how process control technology is used in real-world applications.

**Course ELT2090: Analog Communication 2** Students demonstrate the fundamental concepts of electronic analog communication systems.

**Course ELT2100: Radio Communication** Students demonstrate the fundamental concepts of electromagnetic communication systems.

**Course CTR2110: Project 2A (Basic Electronics Lab)** Students, through projects, extend and enhance competencies developed in the Career Transitions strand or other Career and Technology Studies strands to contexts that are personally relevant. Student selected projects in consultation with the teacher.

### Communications and Electronics - Practicum 1

3 credit course

Journeyman Electronic Technician or Certified Electronic Engineering Technologist required

Delivered in a real or simulated workplace environment

**Course ELT2020: Electrical Servicing** Students demonstrate the fundamental concepts of repairing, servicing and maintaining electrical and electronic equipment. circuit wiring used in residential/commercial buildings.

**Course CTR2120: Project 2B (Basic Electronics Lab)** Students, through projects, extend and enhance competencies developed in the Career Transitions strand or other Career and Technology Studies strands to contexts that are personally relevant. Due to the variety of service work, students' learning will vary with each individual student.

**Course CTR2130: Project 2C (Basic Electronics Lab)** Students, through projects, extend and enhance competencies developed in the Career Transitions strand or other Career and Technology Studies strands to contexts that are personally relevant. Due to the variety of service work, students' learning will vary with each individual student.

### **Communications and Electronics - Work Experience 1**

A minimum of 75 hours of work in the electronic technician trade. May be Work Experience or RAP courses.

### **Communications and Electronics - Level 3**

5 credit course

Journeyman Electronic Technician or Certified Electronic Engineering Technologist required

**Course ELT3010: Electro-assembly 3** Students apply photographic processes to construct a printed circuit for an electronic project.

**Course ELT3100: Analog Communication 3** Students demonstrate the principal concepts of electronic analog communication systems.

**Course ELT3110: Amplifiers** Students demonstrate knowledge of various types and classes of amplifiers.

**Course ELT3140: Motors** Students demonstrate knowledge of electric motor operation and loading characteristics.

**Course CTR3110: Project 3A (Basic Electronics Lab)** Students, through projects, extend and enhance competencies developed in the Career Transitions strand or other Career and Technology Studies strands to contexts that are personally relevant. Student selected projects in consultation with the teacher.

### **Communications and Electronics - Practicum 2**

3 credit course

Journeyman Electronic Technician or Certified Electronic Engineering Technologist required

Delivered in a real or simulated workplace environment

**Course ELT3020: Electronic Servicing** Students develop and apply basic processes and skills to service and repair consumer-based electronic products.

**Course CTR3120: Project 3B (Basic Electronics Lab)** Students, through projects, extend and enhance competencies developed in the Career Transitions strand or other Career and Technology Studies strands to contexts that are personally relevant. Due to the variety of service work, students' learning will vary with each individual student.

**Course CTR3130: Project 3C (Basic Electronics Lab)** Students, through projects, extend and enhance competencies developed in the Career Transitions strand or other Career and Technology Studies strands to contexts that are personally relevant. Due to the variety of service work, students' learning will vary with each individual student.

**Communications and Electronics - Work Experience 2**

A minimum of 125 hours of work in the electronic technician trade. May be Work Experience or RAP courses.