

Lo-Ellen Park Secondary School

ADSC

Architectural Design and Sustainable Construction



ADSC

About Architectural Design and Sustainable Construction (ADSC)

ADSC is a specific pathway that facilitates a student's transition from secondary school to apprenticeship training, college, university or the workplace.

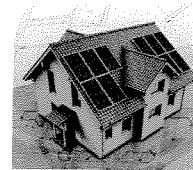
This pathway enables students to gain sector-specific skills and knowledge in engaging, career-related learning environments. This pathway can lead to Lo-Ellen Park Secondary School's Specialist High Skills Majors in Construction or the Environment. As part of the Ministry of Education approved Specialist High Skills Major (SHSM), students graduate not only with all of the benefits received throughout the program, but also with a SHSM Red Seal of recognition on their Ontario Secondary School Diploma (OSSD).

Profile

According to the Ontario Construction Secretariat, the construction industry is one of Ontario's largest employers. The Construction Sector Council has created a province-by-province, trade-by-trade labour market forecast for the next nine years. In Ontario, it is estimated that 200,000 workers will be required to replace those retiring and an additional 75,000 workers will be needed to fill positions related to new construction in the coming years.

There are five categories of work in the construction industry. Each requires specific qualifications and the development of continued life learning skills. Depending on the career chosen, a graduate could work in any or all of these categories:

- ◆ architectural design, which plays an important role in the creation of new energy efficient and sustainable construction;
- ◆ new home building and renovation, including building, remodeling or renovating houses and apartment buildings to meet new standards;
- ◆ heavy industrial construction, including building industrial facilities such as cement, automotive, chemical or power plants, refineries and oil sands installations;
- ◆ institutional and commercial construction, including building commercial and institutional buildings and structures such as stadiums, schools, hospitals, grain elevators and swimming pools; and
- ◆ civil engineering construction, including engineering projects such as highways, dams, water and sewer lines, power and communication lines, and bridges.



Benefits of ADSC

1. Course selections

Upon entering high school, students choose a pathway that will eventually lead them to a postsecondary education or the world of work. The ADSC is designed to provide flexibility of choice within a pathway, while at the same time ensuring that students meet the requirements for their chosen program upon graduation. All course suggestions in the ADSC are taken as electives. There are no additional credits required over and above those needed for the Ontario Secondary School Diploma.

Recommendation

The ADSC pathway allows students the option of taking both Visual Art and Technology classes throughout high school. In Grade 11, a more specific pathway is chosen. For example, students wishing to pursue a career in architecture are required to submit, along with their application to university, a diverse portfolio which includes creative work. For this reason, students may wish to take more Art and Tech Design classes in their senior years. Alternatively, students who plan to pursue a pathway in apprenticeship, college or the workplace may wish to choose more technical classes such as Construction and Green Industry in order to learn about the latest advancements in sustainable construction. As students move forward in the ADSC pathway, there will be ongoing assistance from guidance counsellors and subject teachers to ensure course selections support postsecondary planning.

The following course selections are suggested for success within the ADSC pathway:

Grade 9: AVI1O and TIJ1O

Grade 10: AVI2O and TCJ2O or TDJ2O

Grade 11: Architectural pathway = AVI3M and BAF3M
Construction pathway = TCJ3C and BAF3M
Other choices for Grade 11 include TDJ3M, THJ3M, TWJ3E

Grade 12: Architectural pathway = AVI4M and TDJ4M
Construction pathway = TCJ4C and THJ4M

2. Seven sector-recognized certifications and/or training courses/programs

An additional benefit for students in the ADSC pathway is the availability of sector-recognized certification programs. Five of these are identified as the top industry-recommended certifications and will be completed by all ADSC students throughout high school. The list which follows is comprised of both the compulsory and supplementary certificates. Students will have the option to earn two additional certifications to prepare them for the future.

All certifications are offered to the student at no cost.



The requirements are summarized in the table below.

Compulsory Certificates in the ADSC pathway				
Cardiopulmonary Resuscitation (CPR) Level A	fall protection	generic (i.e. not site specific) instruction about the Workplace Hazardous Materials Information System (WHMIS)	health and safety – basic	Standard First Aid

Industry-related Certificates: Two or more			
chainsaw safety	confined space awareness	electrical safety	elevated work platforms
energy efficiency training	hoisting and rigging	insulated concrete forming	lift truck safety
personal protective equipment – construction	powder-actuated tools	propane in construction	scaffold safety
suspended access equipment	traffic control	trenching safety	

3. Experiential learning and career exploration

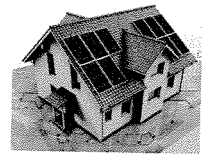
Experiential learning and career exploration opportunities relevant to the sector are included in this pathway. In order to really experience and learn more about the industries surrounding Architectural Design and Sustainable Construction, students participate in planned field trips which may include:

- ◆ a visit to the new School of Architecture
- ◆ out of town trips to popular sites in cities such as Toronto or Ottawa
- ◆ one-on-one observation of a co-operative education student at a placement in the construction sector (example of job twinning)
- ◆ a day-long observation of a skilled tradesperson in the construction sector (example of job shadowing)
- ◆ participation in a local, provincial or national Skills Canada competition
- ◆ a tour of a municipal planning department
- ◆ attendance at a construction sector trade show, conference, symposium or job fair
- ◆ a volunteer experience with a non-profit organization such as Habitat for Humanity

4. Reach-ahead experiences

Students enjoy one or more reach ahead experiences – opportunities to take the next steps along their chosen pathway – as shown in the following examples:

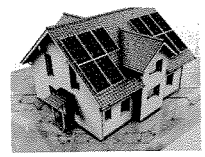
- ◆ **Apprenticeship:** visiting an approved apprenticeship delivery agent in the sector
- ◆ **College:** interviewing a college student enrolled in a sector-specific program
- ◆ **University:** observing a university class in a sector-related program
- ◆ **Workplace:** interviewing an employee in the sector



Potential Occupations

The following table provides examples of occupations students may consider when in the ADSC. The corresponding National Occupation Classifications (NOC Code) is also provided and sorted according to the type of postsecondary education or training the occupations would normally require.

Apprenticeship Training	University
<ul style="list-style-type: none"> • Brick and Stone Mason 7281 • Carpenter 7271 • Construction Millwright 7311 • Electrician 7241 • Heating and Air Conditioning Contractor 7313 • Painter and Decorator 7294 • Plumber 7251 • Roofer 7291 	<ul style="list-style-type: none"> • Architect 2151 • Electrical Engineer 2133 • Mechanical Engineer 2132 • Structural Engineer 2131
College	Workplace
<ul style="list-style-type: none"> • Architectural Design Technician/Technologist 2251 • Civil Engineering Technologist 2231 • Construction Estimator 2234 • Construction Manager 0711 • Construction Technologist 2231 • Contractor and Supervisor – Electrical Trades and Telecommunications 7212 • Home Inspector 2264 • Interior Designer 5242 • Residential Home Builder or Renovator 0712 	<ul style="list-style-type: none"> • Carpenter Helper 7611 • Concrete Finisher 7282 • Construction Trades Helper and Labourer 7611 • Demolition Worker 7611 • Drywall Installer 7611 • Helper – Construction Trades 7611 • Home Renovator 0712



Seven Key Benefits for Students

Participation in the ADSC enables students to:

- 1 Customize their secondary school education to suit their interests and talents
- 2 Develop specialized knowledge and skills that are valued by the sector and postsecondary education institutions
- 3 Earn credits that are recognized by the sector and postsecondary education institutions
- 4 Gain sector-specific and career-relevant certification and training
- 5 Develop Essential Skills and work habits that are valued by the sector, recorded using the tools in the Ontario Skills Passport (OSP)
- 6 Identify, explore and refine their career goals and make informed decisions about their postsecondary destination
- 7 Remain flexible, with the option to shift between pathways should their goals and plans change

**Limited
Enrolment!**

Architectural Design and Sustainable Construction

Personal Information: *Please print neatly and provide the information below.*

Legal Name: _____
Surname First Name Middle Initial

Current School: _____ Student ID #: _____

Home Address: _____

City/Town: _____ Postal Code: _____

Home Telephone: _____ Cell: _____ E-Mail: _____

Which pathway do you plan to pursue? *(Please check one.)*

☐ Apprenticeship Training

☐ Workplace

☐ College

☐ University

Are you currently enrolled as an OYAP student? ☐ Yes ☐ No

Have you taken or are you currently enrolled in any Dual Credit courses? ☐ Yes ☐ No

If yes, please provide details: Course Code _____ Course Name _____

Currently enrolled: ☐ Yes ☐ No

Completed: ☐ Yes ☐ No If yes, provide date of completion: _____

Student's Signature

Parent/Guardian Signature

Print name (Student)

Print name (Parent/Guardian)

Date

Once you have completed the Registration Form, please submit it to the Guidance Department at your school for processing.

In accordance with the Municipal Freedom of Information and Protection of Privacy Act, personal information is being collected under the authority of the Education Act and will be used to register students in the Architectural Design and Sustainable Construction pathway. For more information, please contact the Principal.

Congratulations on choosing an exciting future!

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