DIPLOMA IN COMPUTER AIDED DESIGN AND DRAFTING

At a Glance
Faculty
www.kpu.ca/science (http://www.kpu.ca/science/)

Area of Study:
www.kpu.ca/science/cadd (http://www.kpu.ca/science/cadd/)

Academic Level:
Undergraduate

Credential Granted:
Diploma

Start Date:
Fall (September)
Spring (January)

Intake Type:
• Limited

Minimum Credits Required:
62

Curriculum Effective Date:
01-Sep-2021

Description
The Computer Aided Design & Drafting (CADD) Diploma program is designed to develop and enhance practical skills; increasing students’ knowledge for a successful CADD career. Throughout the program students will design and draft various projects that are produced in digital and physical models. Students will obtain extensive experience utilizing AutoCAD and BIM softwares.

This program offers students two unique ways to approach their learning. First, students may choose from two specializations:
• Architectural and Structural (Fall Admission Intake)
• Architectural and Mechanical (Spring Admission Intake)

Second, the program offers students three options for their studies:
• Diploma in Computer Aided Design and Drafting
• Certificate in Computer Aided Design and Drafting
• Citation in Computer Aided Design and Drafting

The Certificate, and Citation are embedded within the Diploma. They allow students who do not wish to pursue a diploma in CADD to have an optional exit point after two or one semester of coursework. Details on program and course dates are available on Kwantlen Course Timetables. Additional information is available at: kpu.ca/science/cadd (http://www.kpu.ca/science/cadd/)

Options
Diploma in Computer Aided Design and Drafting
The Diploma enables students to acquire advanced technical writing skills, Math skills and Physics skills, and to acquire technical skills in document control, web portfolio and CADD customization, sustainable design project management, and networking. These CADD courses are offered in the evening to facilitate certificate and advanced certificate graduates who are working in their industry.

Diploma in Computer Aided Design and Drafting with Co-operative Education
The Diploma in CADD with Co-operative Education allows students the option of pursuing a credential enhanced with a semester of work placement. Students interested in this credential must apply to and follow the terms and conditions indicated in the General Co-operative Education Requirements (https://calendar.kpu.ca/academic-regulations/co-operative-education/). Students complete the Co-operative Education component of this credential prior to the completion of 2000-level course components in the Diploma. Students interested in this option are advised to meet with an Academic Advisor and the CADD Program Chair.

Certificate in Computer Aided Design and Drafting
The Certificate prepares students for an entry level position as a CADD Drafting technician in the chosen Specialty. Using the most advanced CADD (Computer Aided Design & Drafting) software and 3 dimensional (3D) software, students will learn to produce drawings from concept sketches, design information, codes and specifications as per industry standards for production by builders and manufacturers.

Citation in Computer Aided Design and Drafting
The Citation incorporates the CADD Core which prepares students for the Specialty semester.

Career Opportunities
CADD/Drafting graduates may pursue a career in a variety of employment situations in architectural, engineering, manufacturing or municipal offices, or in a production /construction setting.

After a few years in CADD/Drafting many of our graduates move on to positions in sales, customer service, production management, estimating, CADD and network management and contract services (self-employment). Responsibilities can include design team management, project management of small projects, and production scheduling.

Requirements
Admission Requirements
In addition to the Faculty’s Undergraduate Admission Requirement, which consists of KPU’s Undergraduate English Proficiency Requirement (https://calendar.kpu.ca/admissions/english-proficiency-requirements/), the following program admission requirements apply:
• Satisfy the Math requirement at Level E1 of the Mathematics Alternatives Table (https://calendar.kpu.ca/course-information/mathematics-alternatives-table/); or through successful placement by the CADD Math Placement Test at a minimum of 60%
• Complete the online CADD information session or an interview with a CADD department representative.

Note: Students wishing to complete the Diploma program without having to undertake any preparatory courses must satisfy Level C1 of
the Mathematics Alternatives Table (https://calendar.kpu.ca/course-information/mathematics-alternatives-table/).

**Advanced Standing**

KPU Engineering Certificate graduates admitted to the CADD program may be eligible to receive advanced standing, in lieu of 16 credits of courses in CADD at the 1100 level.

Applicants with Drafting 11 and/or 12 from a BC Secondary School can challenge the CADD 1100 course by writing a Qualifying Assessment. Contact the CADD Department Chair at cadd@kpu.ca for more information.

**Curricular Requirements**

The Diploma in CADD requires 62 credits, including completion of one of the Specializations

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CADD 1150</td>
<td>Computer Aided Drafting &amp; Design (CADD) Software</td>
<td>4</td>
</tr>
<tr>
<td>Select 12 credits from courses in CADD at the 1100 level</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>CADA 1201</td>
<td>Architectural Principles</td>
<td>4</td>
</tr>
<tr>
<td>CADA 1250</td>
<td>Introduction to Building Information Modeling (BIM) Software for Architectural</td>
<td>4</td>
</tr>
<tr>
<td>CADA 2110</td>
<td>Single Family Residential</td>
<td>4</td>
</tr>
<tr>
<td>CADA 2210</td>
<td>Commercial Buildings</td>
<td>4</td>
</tr>
<tr>
<td>CADD 2160</td>
<td>Professional Practice for Design and Drafting</td>
<td>4</td>
</tr>
<tr>
<td>CADD 2220</td>
<td>Sustainable Design</td>
<td>4</td>
</tr>
<tr>
<td>Select 3 credits from a course in MATH at the 1100 level or higher</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CMNS 1140</td>
<td>Introduction to Professional Communication</td>
<td></td>
</tr>
<tr>
<td>ENGL 1100</td>
<td>Introduction to University Writing</td>
<td></td>
</tr>
<tr>
<td>Select one of the Specializations</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Specialization in Architectural and Mechanical Drafting</td>
<td></td>
<td></td>
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<tr>
<td>CADM 1230</td>
<td>Process Piping</td>
<td></td>
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<tr>
<td>CADM 1250</td>
<td>3 Dimensional (3D) Parametric Solids Modeling Software</td>
<td></td>
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<tr>
<td>CADM 2130</td>
<td>Conveyor Systems</td>
<td></td>
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<tr>
<td>CADM 2230</td>
<td>Component Assembly and Details</td>
<td></td>
</tr>
<tr>
<td>Specialization in Architectural and Structural Drafting</td>
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<td></td>
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<tr>
<td>CADS 1200</td>
<td>Introduction to Structural Drafting and Concrete</td>
<td></td>
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<tr>
<td>CADS 1251</td>
<td>Introduction to Building Information Modeling (BIM) for Structural</td>
<td></td>
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<tr>
<td>CADS 2100</td>
<td>Site Work</td>
<td></td>
</tr>
<tr>
<td>CADS 2120</td>
<td>Structural Steel</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits** 62

**Credential Awarded**

Upon successful completion of this program, students are eligible to receive either a Diploma in Computer Aided Design and Drafting, Specialization in Architectural and Mechanical or a Diploma in Computer Aided Design and Drafting, Specialization in Architectural and Structural.

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### Co-op Requirements

#### Co-operative Education

The Computer Aided Design and Drafting diploma is offered with a Co-operative Education option. Co-operative Education gives a student the opportunity to apply the skills gained during academic study in paid, practical work experience semesters. Students can complete one work semester while completing their diploma. Work terms generally occur full-time in separate 4 month work semesters. Work semesters alternate with academic study.

Students wishing to enter and participate in the Co-op Option must meet the following requirements:

**Entrance Requirements**

- Currently admitted to the Diploma in Computer Aided Design and Drafting program.
- Good Academic Standing
- Currently in first-year courses of the Computer Aided Design and Drafting program.

**Work Term and Program Continuance Requirements**

Procedures for enrollment in Co-operative Education work terms are outlined in the COOP course descriptions. Conditions for continuance in the program are:

- Successful completion of COOP 1101 prior to completion of second-year courses of the Computer Aided Design and Drafting program
- Minimum Program GPA of 2.5
- Instructor Permission

**Co-op Course Requirements**

The Co-operative Education designation requires successful completion of the following courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COOP 1101</td>
<td>Introduction to Professional and Career Readiness</td>
<td>1</td>
</tr>
<tr>
<td>COOP 1150</td>
<td>Co-op Work Semester 1</td>
<td>9</td>
</tr>
</tbody>
</table>

**Total Credits** 10

Note: COOP courses must be completed in ascending numerical order. COOP courses may be used only to satisfy the Co-op designation and cannot be used to satisfy other curricular requirements of the program.

**Additional Requirements**

In addition to the requirements stated above, all Co-op students must satisfy the General Co-operative Education Requirements (https://calendar.kpu.ca/academic-regulations/co-operative-education/).

**Credential Awarded**

Upon successful completion of this program with Co-operative Education, students are eligible to receive either a Diploma in Computer Aided Design and Drafting, Specialization in Architectural and Mechanical, Co-operative Education Option or a Diploma in Computer Aided Design and Drafting, Specialization in Architectural and Structural, Co-operative Education Option.