www.pacificdesignacademy.com
info@pdaeducation.com
(250) 383-3631

Architectural Building Technology

2026 DIPLOMA PROGRAM CURRICULUM

NEXT START: September 28, 2026

PROGRAM LENGTH: 15 Months (56 Weeks)

Architectural Drafting (Manual)
This course teaches introductory-level manual drafting techniques and how to understand and read construction drawings. Line weight, hand lettering and dimensioning conventions will be taught as students produce a basic set of architectural working drawings including floor plans, site plans, elevations, sections, and plan oblique. Students will focus on understanding metric and imperial units.

History of Architecture
The designs you will create as an interior designer or building technologist will use style and other aesthetic considerations to communicate. Every style you might choose to deploy brings with it a complex network of cultural and historical associations that will shape how people understand a space and behave within it. This course focuses on using the language of historical styles to describe existing spaces and create new ones. You'll learn the key characteristics of important historical styles and practice applying these styles to project work.

Space Planning
This course establishes a fundamental knowledge of space planning through academic theoretical study and project-based practice. The course is based on the design process of professional practice and introduces a broad set of parameters, such as the prerequisite research and planning process, programming models, documentation and evaluation throughout design development, demonstration of efficient workflow, and introduction to the study of neurasthenics (chronic fatigue syndrome) of the built environment. An understanding the fundamentals of spatial composition, the integrated orchestration of visual elements and principles, and the measured value of human interaction within the built environment form the primary components of this course.

Construction Methods 1
This course introduces core construction concepts, providing students with a comprehensive understanding of evolving industry standards and the building process. Students will learn essential construction terminology and the operation of various tools, as well as develop a foundational grasp of the overall construction process. The course covers critical aspects such as analyzing construction contracts and key project documents, understanding the design process from development through to building occupancy, and estimating construction costs. Additionally, students will gain practical skills in creating sample budgets and preparing construction schedules, equipping them to effectively manage construction projects.

Construction Methods 2
This course is focused on the development of knowledge and skills related to construction industry. Core construction concepts will be introduced to the students which will enable them to understand the changing industry standards and give deeper understanding into the process to build. Students will gain hands on experience using a variety of construction materials and power tools; learn about building design and planning; create and interpret working drawings and sections; learn construction standards and apply it to the projects.

Construction Materials
The purpose of this course is to introduce students to the fundamental aspects of general materials used in today's construction industry. It teaches common elements of construction and encourages students to pursue new and developing construction materials.

Sustainable Design
This course develops student's ability to consolidate a broad range of Interior Design concepts and aptitudes to achieve intelligent and compliant solutions. Students will use the foundational skills and software knowledge developed in other classes to research, develop, and execute a single-family dwelling project. This class will focus on designing with an environmentally conscious purpose and the application of various sustainability standards in building.

CAD 1 – AutoCAD 1
This course introduces students to computer-aided design. They will learn to apply the most important elements of hand line drawing (freehand sketches) to digital technical drawings. Through the details required in line drawings, students will learn the basic code and accessibility issues as they apply towards a space. The importance of line weight, composition, and figurative clarity for the visual communication of interior design will be emphasized.

CAD 1 – AutoCAD 2

Diving deeper into the tools and techniques required for professional-grade 2D drafting and introductory 3D modeling this advanced course builds upon foundational CAD skills acquired in AutoCAD 1. Designed for students who already possess a strong understanding of technical drawing principles and computer proficiency, this course focuses on maximizing efficiency and precision in CAD workflows. Key topics include: advanced editing commands, layer management, block creation and attributes, dynamic blocks, external references (Xrefs), and annotation scaling. Students will also explore advanced plotting techniques, customization of user interfaces, and learn about proper file management. Various layout techniques and publishing methods will be discussed along with creating a successful permit ready drawing set.

CAD 2 - Vectorworks 1

This course is designed to familiarize students with the fundamentals of Vectorworks 2D - including tool sets, layers, and classes. Students complete a series of projects, learning how to generate floor plans and elevations using industry standard guidelines. These techniques are incorporated into presentation renderings of residential homes. Upon completion, students have the skills necessary to develop a residential set of drawings according to specific criteria.

CAD 2 - Vectorworks 2

This course is designed to familiarize students with the fundamentals of Vectorworks 2D including tool sets; layers, and classes. Students complete numerous projects, learning how to generate floor plans and elevations using industry standard guidelines. These techniques are incorporated into presentation renderings of residential homes. Students also dive into the landscape and hardscaping tool, advanced roofing techniques, and custom extrude creation. Upon completion, students have the skills necessary to develop a residential drawing set by criteria.

CAD 3 – SketchUp

Students are introduced to computer-aided design. Creating 2D and 3D models using SketchUp Pro, software for visualizing spaces or developing projects. This course demonstrates how to develop models quickly using measurements, imported CAD files, plan view images of the site or building or space modeling. Materials and textures are applied to surfaces through application of effects such as shadowing that will be explored.

CAD 3 - Presentations (SketchUp/Lumion)

This advanced SketchUp course combines the intuitive 3D modelling capabilities of SketchUp with the advanced CPU-based rendering engine Lumion. Students learn how to organize a SketchUp model efficiently to reduce render times while gaining hands-on experience in producing visually compelling designs, animations, and walkthroughs for architectural projects. Students start by creating 3D geometry in SketchUp and then import this into the user friendly Lumion interface where they apply textures, lighting, and various inbuilt visual effects (FX) to create visually compelling designs.

CAD 4 – Revit 1

This course will focus on understanding and learning the fundamentals of Revit and its use and application in the modern construction industry. This course will introduce the tools and techniques used in Revit to create a 3D model of any structure or component. The fundamentals covered in this course will provide you the necessary skills to start designing your own projects.

CAD4 – Revit 2

This advanced course in Revit focuses on complex modelling, advanced documentation, and integration of Building Information Modeling (BIM) workflows to create real world permit drawings.
Students will explore parametric designs, family manipulation, key legends, and advanced data extrapolation through proper file management. Through hands-on practical experience students will create Tenant Improvement (TI) and Building Permit drawings which comply with local bylaws and BC Building Code.

Design Development 1

This course is an introduction to residential home design principles. Using an analytical problem-solving approach, including programming and space planning, students will gain further experience in understanding industry standard methods of construction as they are guided through a variety of design projects. Presentation methods used to develop and solidify the design during the development process will be further explored as a communication tool, allowing the designer to connect thoughts with visual images as a means of expression.

Design Development 2

This course provides an overview of commercial Interior Design for the commercial industry, including programming and space planning, schematic design, and conceptual development (materials selection and mood board creation), design development (fixtures selection and specification packages), and construction floorplans (including reflection ceiling plans and elevations). The project is based upon real-world criteria and is intended to challenge students to meet the demands of an actual project brief, by working on an existing property, updating the spatial layouts and materials and finish selections that no longer meet the lifestyle objectives desired by the property owner.

BC Building Code

This course introduces students to computer-aided design. They will learn to apply the most important elements of hand line drawing (freehand sketches) to digital technical drawings. Through the details required in line drawings, students will learn the basic code and accessibility issues as they apply towards a space. The importance of line weight, composition, and figurative clarity for the visual communication of interior design will be emphasized.

Project Management & Estimating

This course focuses on core concepts and techniques required for successful project management. This course covers essential aspects of planning, managing, and organizing a project to ensure its successful completion, with an emphasis on time, cost, and resource management.

Collaborative Design Workshop

Within the framework of the design process you will learn essential ideation, design, and workplace skills. The complex problems you'll face in the workforce will require you to think critically and creatively, communicate your ideas effectively, and apply your specialized skills in a collaborative environment. Whether you're working on a largescale building development, making a documentary, contributing to an online magazine, or taking a new fashion line to market, the success of the project will rely on your ability to understand the design process and use essential workplace skills.

Kitchen & Bath Design 1

This course introduces the knowledge and practice of kitchen and bath design - the first of two Kitchen & Bath Design courses of the program - and the National Kitchen and Bath Association (NKBA) standards and practices that govern the industry. Key areas of focus in this course include planning and design principles, product selections and specifications, and integration of multi-trade disciplinary approach. The course will dive into effective communication for project management and will focus on manual sketches and drawing techniques for creating appealing client renders.

Kitchen & Bath Design 2

This course advances the knowledge and practice of kitchen and bath design - the second of two kitchen and bath design courses of the program - and the National Kitchen and Bath Association (NKBA) standards and practices that govern the industry. Planning and design will integrate advanced material and product knowledge, cabinetry fabrication, construction and installation, and multi-disciplinary trades - lighting, electrical, plumbing, and smart and automation technologies. Students will focus on client conveniences by incorporating cutting edge technologies and modern-day appliances with advanced lighting, smart devices, and high-performance materials.

Lighting

This course provides an overview of the fundamental principles of designed lighting systems for residential and commercial spaces, with a primary emphasis on lighting design for technically intensive zones like kitchens, bath, work, and display areas. Advancements in manufacturing and digital technologies for contemporary lighting and their attendant ecological effects will also be discussed. The course is intended to overlay with Space Planning to allow students to fully complete design development phase documents for a basic design project.

Sales and Promotion

Knowing and understanding sales skills and techniques allow students to use their newly learned skills in the working world. Using National Kitchen and Bath Association (NKBA) materials, as well as materials from others, this course is designed to examine sales and promotion through three main aspects: designer, customer, and brand.

Professional Practice

This course is designed to familiarize students with the fundamentals of professionalism. Students will learn about contract documentation, approaching clients, retaining clients, and the overall design process. This course will also dive into Business Incorporation, GST/PST accounts, WorkSafeBC (WSCB), and insurance requirements as well as general business aspects of design.

Portfolio

Portfolio preparation is the process of taking inventory of the work completed throughout the program and incorporating it into an organized, cohesive, visual record of your education and experience. Through self-assessment, open evaluation, and exploration of graphic and organizational components, you will be guided through a progression of steps that allow you to identify a visual direction in the process of creating a portfolio of work.