

Architectural Design & Drafting

Quick Start Guide

“Form follows function,” said architect Louis Henri Sullivan, a mentor to Frank Lloyd Wright. It is one of the hallmarks of twentieth-century architectural design. It is an ideal that has been integrated, pondered, discarded and reused, and in some cases, completely disregarded. Not so in our Architectural Design and Drafting program, where you’re not only taught drafting and design fundamentals, but also how to apply problem-solving skills to residential and commercial buildings using architectural history as a guide. Our program provides the fundamental building blocks necessary to begin a career as a residential designer/architectural drafter. Whether you’re studying residential designs of Wright, the commercial buildings of Ludwig Mies van der Rohe, or trying to understand how to apply building codes to residential homes, our program provides a sound foundation for your career.

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Drawing your Future

Ours is one of the few design and drafting programs in which you can acquire the fundamental skills in drafting and building design in only two years, studying under some of Oregon's best instructors. Our instructor resources, coupled with a broad-based curriculum, which emphasizes AutoCAD and courses such as Working Drawings, Residential Design and Building Systems, offer a unique opportunity to enter a discipline for which there will always be a need. Our program allows you quick entry into a field in which sound and stable design is highly valued, and it allows you to tailor classes to a specialized career, such as remodeling, kitchen and bath design, or green building. Our uniquely flexible curriculum caters to a broad array of interests within the building design industry. Many of our design and drafting graduates have started their own businesses or work for large design firms. Neil Kelly, Morrisette Homes, Argo/Architect, and Ankrom/ Moisen Associated Architects are just a few established companies that hire our graduates.



Getting Started at PCC

- ▶ PCC has a lot of services to help new and transfer students get started. Here are two lists to help you get started:
 - ▶ New to college:
<http://www.pcc.edu/resources/advising/documents/checklist.pdf>
 - ▶ Been to college before:
<http://www.pcc.edu/resources/advising/documents/previous-college.pdf>
- ▶ If you need help getting started at PCC, you should use the advising office and the advising website:
<http://www.pcc.edu/resources/advising/>
- ▶ PCC has an excellent website that is set-up to help new students navigate the school. If you are looking for something you can probably find it under the “resources” tab on the homepage:
<http://www.pcc.edu/resources/#student>



AAS Architectural Design and Drafting

- Degree Requirements -

ARCHITECTURAL DESIGN AND DRAFTING BASE DEGREE

This degree focuses on drafting any size structure, residential design and small commercial design.

AAS DEGREE

Minimum 99 credit hours. Students must also meet Associate Degree Comprehensive Requirements and Associate of Applied Science Requirements. Students must complete a total of sixteen credits of General Education.

Course of Study

The coursework listed below is required.

Introductory Courses

ARCH 110 Introduction to Architectural Drawing 2
ARCH 121 Structural Systems I
ARCH 124 Introduction to Building Systems 3
ARCH 126 Introduction to AutoCAD 3
ARCH 127 Introduction to Google Sketch-up 3
ART 215 History of American Residential Architecture 3

Intermediate Courses

ARCH 101 Architectural Graphics I 3
ARCH 132 Residential Building Codes 2
ARCH 122 Structural Systems II 4
ARCH 136 Intermediate AutoCAD 3
CAD Electives 3
ARCH 111 Working Drawings I 3
ARCH 113 Site Planning 2
ARCH 256 Detail Drawing with AutoCAD 3
ARCH 133 Commercial Building Codes 2

Advanced Courses

ARCH 123 Structural Systems III 4
ARCH 224 Active & Passive Building Systems 4
ARCH 112 Working Drawings II 3
ARCH 102 Architectural Graphics II 3

ARCH 201 Residential Studio 6
ARCH 202 Commercial Studio 6
ARCH Degree Electives 3
ARCH 203 Residential Renovation Studio 6
ARCH 280 CE: Architectural Design & Drafting 4

Architectural Degree Electives (6 credits required)

ARCH 100 Graphic Communication for Designers 3
ARCH 131 Sustainable Building Strategies 4
ARCH 200 Principles of Architectural Design 4
ARCH 204 Green Residential Studio 4
BCT 108 Intro to Building Science 3
BCT 116 Alternative Building Design 3
BCT 206 Sustainable Construction Practices 3
ID 121 Sustainable Materials for Res. Interiors 3 ID
131 Introduction to Interiors 3
ID 133 Space Planning 3
ID 135 Professional Practice for Designers 3
ID 138 Introduction to Kitchen & Bath Planning 3
ID 236 Lighting Design 3
ID 238 Advanced Kitchen and Bath Planning 3

Architectural CAD Electives (3 credits required)

ARCH 137 AutoCAD Architecture 3
ARCH 237 Introduction to Autodesk Revit 3
ARCH 247 Intermediate Revit Architecture 3

General Education Requirements

You can find the general education worksheet for the Associates of Applied science degrees on this page:

<http://www.pcc.edu/programs/university-transfer/transfer-guides/documents/worksheet-aas.pdf>



AAS Architectural Design and Drafting - RESIDENTIAL

- Degree Requirements -

ARCHITECTURAL DESIGN AND DRAFTING – RESIDENTIAL

This degree focuses more in-depth on residential design and drafting.

AAS DEGREE

Minimum 97 credit hours. Students must also meet Associate Degree Comprehensive Requirements and Associate of Applied Science Requirements. Students must complete a total of sixteen credits of General Education.

COURSE OF STUDY

The coursework listed below is required.

Introductory Courses

ARCH 100 Graphic Comm. for Designers 3
ARCH 110 Introduction to Arch. Drawing 2
ARCH 121 Structural Systems I 2
ARCH 124 Introduction to Building Systems 3
ARCH 126 Introduction to AutoCAD 3
ARCH 132 Residential Building Codes 2
ARCH 136 Intermediate AutoCAD 3
ID 131 Introduction to Interiors 3

Intermediate Courses

ARCH 101 Architectural Graphics I 3
ARCH 122 Structural Systems II 4
ARCH 113 Site Planning 2
ID 133 Space Planning 3
ARCH 200 Principles of Architectural Design 4
ID 138 Intro to Kitchen and Bath Planning 3
ID 236 Lighting Design 3

ARCH 111 Working Drawings I 3
ART 215 History of American Res. Arch. 3
ID 121 Sustainable Materials for Res. Interiors 3

Advanced Courses

ARCH 102 Architectural Graphics II 3
ARCH 201 Residential Studio 6
ARCH 224 Active & Passive Building Systems 4
ID 238 Advanced Kitchen and Bath Planning 3
ARCH 203 Residential Renovation Studio 6
ARCH 280 CE: ARCH Design and Drafting 4

Residential CAD Electives

ARCH 127 Introduction to Google SketchUP 3
ARCH 137 AutoCAD Architecture 3
ARCH 237 Revit Architecture 3
ARCH 247 Intermediate Revit Architecture 3
ARCH 256 Detail Drawing with AutoCAD 3

General Education Requirements

You can find the general education worksheet for the Associates of Applied science degrees on this page:
<http://www.pcc.edu/programs/university-transfer/transfer-guides/documents/worksheet-aas.pdf>



Architectural Design & Drafting Certificate Programs

SUSTAINABLE BUILDING CERTIFICATE

Minimum 42 credit hours. Students must also meet comprehensive certificate requirements.

COURSE OF STUDY

The coursework listed below is required.

Foundation Courses

ARCH 101 Arch Graphics I 3
ARCH 124 Introduction to Building Systems 3

Intermediate Core Courses

ARCH 224 Passive & Active Bldg Systems 4
BCT 206 Sustainable Const. Practices 3
ID 121 Sustainable Materials for Res Interiors 3
PHL 206 Environmental Ethics 4
ARCH 113 Site Planning 2
SOC 228 Environmental Sociology 4
ARCH 131 Sustainable Building Strategies 4
ESR 171 Environmental Science 4
or
ESR 172 Environmental Science 4

Advanced Courses

ARCH 204 Green Residential Studio 4
ARCH 280 CE: Arch Drafting 4

The following courses are required prerequisites for the Sustainable building certificate. These prerequisites can be met through previous study, coursework at PCC or equivalent work experience.

ARCH 110 Intro. to Arch. Drawing
ARCH 126 Intro. to AutoCAD
ARCH 136 Intermediate AutoCAD
WR 115 or Placement into WR 121
MTH 20 or Placement into Math 60 or higher

KITCHEN AND BATH CERTIFICATE

Minimum 62 credit hours. Students must also meet certificate requirements. The Kitchen and Bath Certificate is a related certificate.

COURSE OF STUDY

The coursework listed below is required.

Foundation Courses

ARCH 100 Graphic Communication for Designers 3
ARCH 110 Introduction to Architectural Drawing 2
ARCH 124 Introduction to Building Systems 3
ID 125 Computer Drafting for Interior Designers 3
ID 131 Introduction to Interiors 3
ID 121 Sustainable Materials for Residential Interiors 3
WR 121 English Composition (or higher) 4
MTH 65 Introductory Algebra (or higher) 4

Intermediate Core Courses

ID 132 Planning Interiors 3
ID 133 Space Planning 3
ID 138 Introduction to Kitchen and Bath Planning 3
BCT 244 Kitchen and Bath Cabinet Installation 2
ID 225 CAD for Kitchen and Bath Design I
ID 236 Lighting Design 3
ARCH 111 Working Drawings I 3
ARCH 121 Structural Systems I 2
ARCH 132 Residential Building Code 2
ART 215 History of American Residential Arch.3
BA 238 Sales 3

Advanced Courses

ID 238 Advanced Kitchen and Bath Planning 3
ID 135 Professional Practice for Designers 3
ID 280A CE: Kitchen and Bath 3



First Term Class Planning

Full-time Student (12 – 19 credit hours) This schedule works for either ARCH degree.

- ARCH 110 Intro. to Arch. Drawing (2 credits)
- ARCH 126 Intro. to AutoCAD (3 credits)
- ARCH 124 Intro. to Building Systems (3)
- ARCH 132 Residential Building Codes(2)
- Math 20, 60 or 65 if needed (4) **and/or** ARCH 121 Structural Systems I(2)

Part-Time or Three-quarters Time Student (under 12 credit hours)

- ARCH 110 Intro. to Arch. Drawing (2)
- ARCH 124 Intro. to Building Systems (3)
- + One or more classes from this list.
 1. ARCH 126 Intro. to AutoCAD
 2. Math 20, 60 or 65 if needed (4)
 3. ARCH 132 Residential Building Codes (2) * Must have completed or be concurrently enrolled in the ARCH 124.

I just want to take a class to try it out.

- ARCH 110 Intro. to Arch. Drawing (2)
- ARCH 200 Principles of Architectural Design (4)
- ARCH 126 Intro. to AutoCAD (3)

I just want to take CAD classes.

- ARCH 126 Intro. to AutoCAD (3)
- ARCH 237 Intro. to AutoDesk Revit Architecture (3)
- ARCH 127 Intro. to Google Sketchup (3)

- You can find the schedule of classes online at www.pcc.edu/schedule
 - You can find a class planning worksheet at this link:
http://www.pcc.edu/programs/schedules/documents/schedule_planning.pdf
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Frequently Asked Questions

- 1. I've never been to college before and I feel lost. How can I get help?** PCC has lots of resources to help new students. A good first stop would be an advising office (<http://www.pcc.edu/resources/advising/>) on any of our campuses. They are set up to help new students make a smooth transition to college life.
 - 2. What level do my reading, writing and math need to be at to start in the degree or certificate programs?** Students should be at least entering into the *WR 115 Intro. to Expository Writing* or a higher writing level when starting the first term of architectural design and drafting classes. Students can start at *Math 20 Basic Math* or any level higher than this.
 - 3. I've already been to college and I want to see what classes will transfer?** You will need to contact your previous schools and send in your official transcripts to the Student Records office and then request an official transcript evaluation. http://www.pcc.edu/resources/student-records/documents/Transfer_Evaluation_Request_Form.pdf Our first quarter classes don't have prerequisites so you can get started in classes your first term while you complete these process. However, the evaluation should be complete by the time you register for your second term of classes, as the second term classes have writing and math prerequisites. If you haven't taken college level writing or mathematics higher than algebra, you will need to take the college placement tests prior to starting classes: <http://www.pcc.edu/resources/testing/placement/>
 - 4. I already have a college degree, what classes will transfer into the program?** General Education requirements will be waived for students who enroll at PCC with an A.A., A.A.S., A.G.S., A.S., B.A., B.S. degree or higher from a regionally accredited United States institution. Program-specific General Education requirements for AAS degrees will not be waived. Students with A.A., A.A.S., A.G.S., A.S., B.A., B.S., degrees or higher from a U.S. regionally accredited institution will have the basic competency in writing (WR 121) waived. Other writing requirements specified by the program remain in effect. The math requirement for the degree will have to be evaluated based on previously completed math classes. If you haven't taken a math course in college you will need to take the math placement test and complete our Math 65 requirement. Student's with a previous degree that meet the criteria above do not need to request a complete evaluation from the student records office. However, you do need to send in your official undergraduate transcripts from every institution you attended to the student records office. Our first quarter classes don't have prerequisites so you can get started in classes your first term while you complete this process.
 - 5. I'm just doing research about the field of architectural design and drafting, where can I get more information?** There are two main ways to get more information about the career field of architectural design and drafting at PCC. You can attend an information session. The schedule can be found at www.pcc.edu/staff/choul.wou and you can just show up to the time that best fits your schedule – there is no RSVP. Or you can visit any of our career centers: <http://www.pcc.edu/resources/careers/resource-centers/>
 - 6. How do I get into the program?** The program is an open entry program, which means you can just get started in the next quarter. The academic calendar lists registration dates and start dates: <http://www.pcc.edu/registration/academic-calendar.html> You can start the architectural design and drafting program any term of the year; fall, winter, spring, and summer. There is no additional application to the program after you've applied to PCC.
 - 7. How is this program different than a four or five year program?** The most basic difference is that the PCC program specializes in training to students to go to work as drafters of any size structure or doing residential or small commercial design work, while most four or five year programs will focus on large commercial design. The PCC program is a practically based program that is geared toward getting students to work after they graduate. Some of our students transfer on to a four year school. Most bachelor degree programs are going to be focused on design theory, academics, and conceptual design. Students who graduate from our program and don't continue their education typically hold the job titles of drafters, building designers and residential designers.
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FAQ's Continued...

- 1. I have a job, can I complete the program part-time? In the evening only?** It's no problem to attend part-time. We offer most classes at least once per year in the evening and once per year in the day. However, the three second year advanced studio classes are offered only during the day in the afternoons.
 - 2. I've already worked in the field, can I get credit for work experience?** PCC doesn't have a way to give credit or waive required classes based on prior work experience. If you've had formal training, but not received college credit, you may be able to apply for non-traditional credit through our student records office: <http://www.pcc.edu/resources/graduation/documents/request-non-trad-credit.pdf>
 - 3. I've taken specific architecture and/or interior design classes at another college or university, can I get them transferred into the program?** Possibly. You must submit your transcripts either to the student records office (see #2 on the previous page) or directly to the department. Evaluations can take several weeks to complete, so if you have classes you are hoping to transfer in please plan to get your transcripts in early. Also, in some cases we may request that you bring in a portfolio of previous coursework in order to complete the official program evaluation. Please be aware that you must earn a minimum of 24 credits from the PCC architectural design and program excluding courses used solely for the General Education requirements.
 - 4. Do I need to buy a computer before I start the program?** There is no computer requirement for this program. We have open computer lab times with the software available for students to use. Having a computer at home can be convenient when in more advanced courses. The architecture program uses PC computers. We run the programs AutoCAD, REVIT and Google Sketchup Pro.
 - 5. Do I have to already know how to draw before I start the program?** No, drawing skills are not a prerequisite to the program. If you don't know how to draw, you will learn this skill in your courses. You are required to learn to draw by hand and on the computer.
 - 6. How long will it take to complete the program?** Full-time students usually attend a minimum of seven terms to complete the program. Part-time students can spread the program out longer. How quickly you complete the program really depends on the number of credits you take each term. If you're planning on attending the program longer than six years, you should check in with the program advisor during your first term of classes.
 - 7. Can I get a two year map of every class I'll take each term?** There is a lot of flexibility in the architectural design and drafting program during the first year of classes and the class schedule is only available before each term. Your schedule in the first year (except the first term) will depend on when classes are offered and what term you start classes. When you start the program it's most important to know your first term of classes and once you're in your first term, the program advisor will be available to help you plan your second term of classes so you can stay on track.
 - 8. Will my classes transfer to another school or program?** There are several options for transferring with either PCC classes or with one of the degrees. The following slide has more information on transferring. For students who are interested in these schools you should plan to visit those schools early in your education.
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Transfer Options

Portland Community College

- AAS Architectural Design and Drafting
- AAS Architectural Design and Drafting—Residential

With one of these degrees a graduate is qualified to be a Building Designer, Residential Designer or a Drafter.

Definition: Building Designers or Residential Designers, specialize in designing single family homes and remodels/ additions to homes. In some cases, they may also design small light frame commercial buildings (usually less than 20 ft. high and 4000 sq ft per floor), agricultural buildings, and decorative facades for larger buildings. Unlike architects, building designers are not legally required to pass exams or receive special licenses.

Most graduates of this program go to work in the building design field or work as CADD drafters in any type of architectural or engineering firm.

TRANSFER OPTIONS with the PCC AAS Architectural Design and Drafting degree

University of Idaho: B.S. Arch. + M.ARCH*
Washington State University: B.S. Arch. + M.ARCH*
Montana State University: B.S. Arch. + M.ARCH*

TRANSFER OPTIONS with the PCC AAS Architectural Design and Drafting - Residential Degree

Oregon State University: B.S. Housing Studies**
Marylhurst University: B.F.A Interior Design, B.A. Art*

* Transferring coursework to these schools is done on a class by class basis and sometimes includes a portfolio review. In addition, we have students who have transferred successfully all over the United States. It's best to research schools early and understand transfer policies.

** The OSU program is a block transfer program, which means you must complete the AAS Architectural Design and Drafting degree as well as specific general education classes. During your first term of classes at PCC you should consult the program advisor for more information on this transfer program.

University Programs

- B.ARCH (5 years)
- B.S Architecture + M.ARCH (4 years + 2 years)

With either the B.Arch or M.Arch degree a graduate qualifies to do an internship (minimum 3 years) and then once the internship is complete to take the exams to become a licensed architect.

Definition: An architect is a licensed professional who organizes space. Architects design houses, office buildings, skyscrapers, landscapes, and even entire cities. Architects are trained in many areas, from historic preservation to structural engineering. Like doctors and lawyers, architects have completed university programs and lengthy internships. In most parts of the world, architects must pass a series of rigorous exams in order to be licensed. In North America, the initials RA designate a registered, or licensed, architect.

Educational Options: Most schools offer what is called a 4 + 2 program. In this type of program, you complete a pre-professional degree in architecture during the first four years, which is usually called a B.S. Architecture. Once you've completed the first bachelor's degree you can apply for a two year M.ARCH degree. If you already have a bachelor's degree in something else (e.g. history) , then you have to apply to a three or more years M.ARCH degree program.

NW Accredited Schools

University of Oregon: B.ARCH*
Portland State University: B.S. Arch.+ M.ARCH*
University of Washington: B.S. Arch. + M.ARCH*
Washington State University: B.S. Arch. + M.ARCH**
University of Idaho: B.S. Arch. + M.ARCH**
University of Montana: B.S. Arch. + M.ARCH**

*Students who plan to attend one of these programs should work with a general advisor on taking general education classes at PCC.

**The PCC architectural design and drafting classes transfer to these schools.

•You can find a list of the accredited schools in North America at www.naab.org

Preparing for a university program

Most university architectural programs required a portfolio application. The recommended ARCH and ART courses to help build a portfolio are: ARCH 200, ARCH 100, ART 131, ART 115, ARCH 116, ARCH 117



What do I do next?

1. The first step is to attend a program information session. These sessions are offered regularly and are an invaluable introduction to the career field, graduate jobs, transferring, student work examples, professional development, and getting started in the program. You can find the schedule online at www.pcc.edu/staff/choul.wou There is no RSVP to attend; you can just show up to the time that best fits your schedule. The session typically lasts about an hour and a half. Most students find the session answers their question and gives them valuable information to help plan their education and careers. The information session is not a requirement to getting started.
2. If you plan to start classes during the next quarter or a later quarter, you can find registration dates, term start dates and class schedule availability on the academic calendar: <http://www.pcc.edu/registration/academic-calendar.html>
3. It's fine to register for classes before attending the information session. You can even attend a session while in your first term of classes. To view the schedule of classes for the next available term, you can find it online at www.pcc.edu/schedule Don't see the term you're looking for? Then check the academic calendar for the date the next term's schedule is available.
4. Use one of these checklists to help guide you in what you need to get done to get started at PCC. These are the same lists from the first page.
 - ▶ New to college: <http://www.pcc.edu/resources/advising/documents/checklist.pdf>
 - ▶ Been to college before: <http://www.pcc.edu/resources/advising/documents/previous-college.pdf>
5. Feel free to email the program advisor if you have a quick question: choul.wou@pcc.edu Unfortunately, the advisor doesn't have time to meet with each prospective student individually to go over the information session content. Please plan to attend an information session if you need this material. Thanks!

