

We all want the best for our kids. In this economy, parents are forced to make tough financial decisions impacting their son's or daughter's post-high school education. There is a great deal of uncertainty about

job prospects when young people graduate and enter the workforce – even with a college degree.



That's why apprenticeship is the ideal post-secondary choice for students who want to reach a mid-level career position upon graduation, and for budget-conscious parents who understand the value of working and learning at the same time.

## What is apprenticeship?

Apprenticeship is a blended learning model combining collegearticulated education with applied learning employment.

Apprenticeships exist in many high-demand, high-technology sectors across the country and globally. In fact, it is a recognized career route in many European nations, Australia and Canada. Most apprenticeships in the United States are registered federally and at the state level. Registered apprenticeships adhere to rigorous program standards. They are regulated just like peer programs in public and private colleges, universities and career schools.

#### **Education + Work = Success**

What makes registered apprenticeship distinct from other post-secondary options is the required connection to work: apprentices are students who are employed in their program of study. They are getting direct, relevant experience in their chosen career, even advancing in their profession as they learn. As a result, they graduate an expert in their field – not a novice.

There must be a job opening for a student to begin her or his apprenticeship. Education and on-the-job training are usually concurrent. Some apprentices attend school and complete their tenure with one employer; others gain employment with different employers, called training agents. In order to graduate, an apprentice must successfully complete his/her schooling, which is a mix of academic and technical education, and his/her employment competencies. In many cases, apprentices earn a degree when they graduate.

Apprenticeships are not internships – they are far more demanding, and in most established programs, the apprentice earns a living wage and benefits while completing his/her education. Not all interns are paid during their work experience – and not all interns are hired when they finish their practicum.

In many cases, apprentices can earn at least an associate's degree concurrent to completing their apprenticeship – and in some cases, apprentices are even earning baccalaureates. These dual accreditations can be incredibly useful in a young person's professional portfolio. Depending on the size of the program, many apprenticeships are co-located at colleges or at their own independent campuses.

## How does apprenticeship compare to college programs?

There are many similarities between apprenticeship and college:

- ★ Both are regulated and accredited or registered with governmental agencies
- ★ Apprenticeships must adhere to industry-recognized standards; many college programs do, too
- ★ Apprentices and college program graduates receive a recognized, portable certificate or degree
- ★ Apprenticeship and college instructors are credentialed educators
- ★ Both will have competitive entrance requirements

## What career options are there in Washington's Apprenticeships?

The majority of Washington's registered apprenticeships link into critical Pacific Northwest industries. In many cases, the apprenticeships, such as construction and energy, cannot be outsourced. A young person should plan to do the following in their high school program of study for ANY apprentice-able occupation:

- ★ Pursue additional, rigorous math and science beyond the high school graduation requirement, especially courses in algebra, geometry and trigonometry, environmental studies and physics
- ★ Produce solid grades in language arts, particularly courses focusing on reading comprehension and idea synthesis
- ★ Select professional-technical elective series that will give them an advantage in the post-high school apprenticeship application process
- ★ Engage in extracurricular activities including sports, service learning, and professional or entrepreneurial clubs related to their career interests



## **Aerospace & Advanced Manufacturing**

The aerospace and advanced manufacturing sector is pivotal to Washington's economy. This sector includes world-class manufacturers, such as Boeing. It also includes diverse supply chains that are designing and manufacturing ingenious products and processes that keep air travel comfortable and safe.

The aerospace industry requires apprentices in precision machining, aircraft mechanics, and industrial control technicians – and when these apprentices reach a journey-level status, they possess transferable skill sets to other advanced manufacturing settings, such as composites, electronics and health informatics.

In fact, advanced manufacturing isn't a stodgy assembly line of widget makers. Apprentices in this path must be inventive troubleshooters who thrive in ever-changing, high output conditions. From composites to electric cars, today's advanced manufacturing careers encompass a range of state-of-the-art, inventive products and require modern skill sets. Students who can connect creativity to precision detail work do particularly well in these professions.

## Center of Excellence for Aerospace and Advanced Materials Manufacturing: a2m2.net ospace and Advanced Materials Manufacturing

#### **Construction**

The majority of apprentice-able pathways in Washington are construction careers. Construction apprenticeships are a distinct route to the highest paid jobs in the sector. These apprenticeships include licensed professions, such as electricians and plumbers, as well as mechanical, structural and finishing crafts. Their work encompasses the design, building and maintenance of nearly all engineered (people-made) environments. Construction is experiencing its own renaissance – multi-faceted young people who are strong in mind and body do guite well in this field.



Like energy, construction careers are typically ranked among the highest of green occupations. Well-trained construction apprentices are stewards for the environment, and their superior skill sets make a difference in building, preserving and restoring homes, commercial buildings, roads, bridges and more. The construction apprentice graduate ranks among skilled craftspeople with superior training in safety, accuracy and artistry. CENTER OF EXCELLE

#### Energy

Energy is a fundamental element of everyday life. It generates commerce and fuels economic growth, supports modern society's complex systems—patient care, air traffic control, running a business and makes the fun things in life possible—lights at a baseball field, air conditioning at theaters, and rides at fairs. Without energy, no industry can survive.

The modernization of our power grid will require advanced skill sets for energy craft and professional workers. High wage, skilled jobs in the energy trades are highly sought after career opportunities. Community college energy pre-apprenticeship programs educate and place students in generation, transmission



and distribution jobs. From power plant operators, mechanics and electricians to substation operators and line workers, these positions offer long-term career opportunities for students who have a passion for working outdoors and keeping America's lights on. Energy professionals are a rare breed of the physically fit and academically astute. In fact, they are rock stars of math and science!

The Pacific Northwest Center of Excellence for Clean Energy: cleanenergyexcellence.org



#### Marine Manufacturing & Technology

Boat and ship building are in a robust period of innovation. This cutting-edge industry is evolving rapidly with modern advanced composites, metal alloys, propulsion and navigation systems, onboard commercial vessels, small recreational boats, super yachts and even luxury and sporting novelties. Like the other industries featured in this guide, marine manufacturing has played a critical role in international and national marine security regulations; in fact, the responsiveness of this industry and its inventive, innovative security, navigation and electronics systems are influencing improvements in other transportation sectors. (Continued on next page.)

I never knew about the college-level options my son could pursue through an apprenticeship. I guess I thought trades jobs were low wage, low education jobs – boy, was I wrong! You need to be a creative, math-savvy problem solver to be in a construction, aerospace or energy apprenticeship!

~ John D.



There are several apprenticeships offering specialties in marine-based technologies that are fundamental to Washington's

vibrant boat and ship building, maintenance and industrial sectors. Young people who thrive in marine manufacturing are scientific and technical adventurers. They love scientific application and are terrific at trending industry developments. They also tend to be action and extreme sports enthusiasts, particularly surfers, skaters and racers! Professionals who chart a course in marine manufacturing will possess highly transferable skill sets in navigation, security, logistics, onboard systems, materials and trade—and especially other advanced transportation manufacturing, such as automotive and aerospace.

Northwest Center of Excellence for Marine Manufacturing & Technology: www.marinecenterofexcellence.com

My daughter went to college, racked up enormous bills, and ended up discovering her real passion through an apprenticeship. She thought she had selected a college major that could connect her to the job she wanted – and all along, she could've pursued that college-level education with a direct link to the occupation that interested her. When my son starts researching his post-secondary options, apprenticeship will be at the top of our list!



### **Developing Apprenticeships**

More industries are choosing apprenticeship as their preferred education route, because it increases company loyalty and productivity, ensures training matches their specific occupational needs, and contributes to economic growth.

There are new apprenticeships being created in **health care**, **information** technology, accounting, hospitality and even early childhood and secondary education!

Apprenticeship is *just the beginning* for many professionals in these industries. Many become business owners, program coordinators and educators, union and government officials, and policy advocates. Some of these fields are considered "non-traditional" for women, but as Millennials have grown into young adults, more young women choose these jobs and rank among leaders in their industries.





# What kinds of wages do apprentices earn?

- ★ Starting apprentice \$17.59/hr + benefits and pension\*
- ★ Journey worker (apprenticeship graduate) -\$27.20/hr + benefits and pension\*
- \* Note: Washington statewide averaged across programs, as reported by Washington State Department of Labor & Industries, March 2012. Many occupations offer wages that are even higher check out **www.Lni.wa.gov/Apprenticeship** for details.



# How does a person get accepted into an apprenticeship?

Apprenticeship is not for everyone. It is competitive and rigorous. Because the model is dependent upon a job opening, it's important to be the best candidate possible. Just like any college, every apprenticeship has different applications and times in which to apply, and different prerequisites.

#### Generally, minimum pre-requisites for apprenticeship include:

- ★ High school diploma
- ★ Solid math and science grades in high school transcripts B or better
- ★ 18 years of age or older to complete an application
- ★ Valid driver's license with a safe driving record
- ★ Reliable transportation apprentices may travel extensively for work

#### Applications for apprenticeships typically include:

- ★ Admissions paperwork when the program of choice is accepting applications. This will include resumes and transcripts in most cases. Remember, each program is different, and the candidate should find out if the application process is online or in person.
- ★ Aptitude testing administered at a community or technical college, such as the COMPASS test. Many programs have prerequisites for math and reading comprehension. In addition to aptitude testing, the candidate may be asked to take an interest inventory.
- ★ The candidate will be interviewed with the apprenticeship's committee. Apprenticeship committees are comprised of business and labor leaders within the industry, and they oversee program curriculum, standards and student selection. Preparing for an apprenticeship interview is essential; understand they are looking for individuals who demonstrate work readiness.

My daughter wanted to pursue an apprenticeship, and my knee-jerk reaction was "No! You have to get a college degree to get a good job!" She had attended a construction career fair and was really excited about Sheet Metal — a field I knew nothing about. She was persistent (she takes after me!) and so we did our research. I couldn't have been more wrong. Now she plans to apply to both the union and non-union programs with the goal of getting accepted this summer. Her starting wage could be higher than my desk job, and both options provide fine academic and on-the-job training. She says her ultimate goal is to become a Sheet Metal Architect — a field that combines practical use with beautiful application. How cool is that???

#### How can I help my son or daughter get started?

- ★ Arrange visits to apprenticeship campuses. Every program welcomes tours of its facilities.
- ★ Attend apprenticeship fairs with your son or daughter. There are wonderful, interactive fairs for high schoolers held all over Washington each year. Who knows after you meet some programs, YOU may want to make a career change!
- ★ Review individual program information through Washington State Department of Labor & Industries (L&I). The primary way to see the programs in your area and which are taking applications is to research the Apprenticeship Registration and Tracking System (ARTS) on the L&I website at: www.Lni.wa.gov/Apprenticeship. You can search this database by county, occupation, or specific program name. ARTS will show you program outcomes too.
  - Remember, researching apprenticeship takes as much concerted effort as comparing college programs. To make sure your daughter or son pursues the program that is right for her or him, devote time to this process.
- ★ Assist in preparing your son or daughter to apply for apprenticeship. Just like any college, your student should follow the application process exactly. Because apprenticeships are post-secondary education AND jobs, following instructions is critical to being considered in these competitive programs.



#### What else should I know?

- ★ Apprenticeship is a terrific route for any job seeker! If YOU are looking for a career change, rest assured, many adults in established careers make a switch to apprenticeship. Many who shied away from returning to college see apprenticeship as the best choice for them. It is a terrific way to earn a living wage and pursue higher education at the same time!
- ★ If you are a business owner and are excited about this model, you could become a training agent with an established registered apprenticeship, or even begin your own program! There are incredible resources and consultants ready to assist you at www.Lni.wa.gov/Apprenticeship.



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Washington State Department of Labor & Industries www.Lni.wa.gov/Apprenticeship



Apprenticeship & Nontraditional Employment for Women **anewaop.org** 

## **Other Apprenticeship & K-12 Resources**

- ★ exploreapprenticeship.wa.gov this interactive site gives a good overview of apprenticeship across industries in Washington state
- ★ **k12.wa.us** the Washington State Office of the Superintendent of Public Instruction Career Technical Education department links schools, programs and parents in support of your son's or daughter's professional goals

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