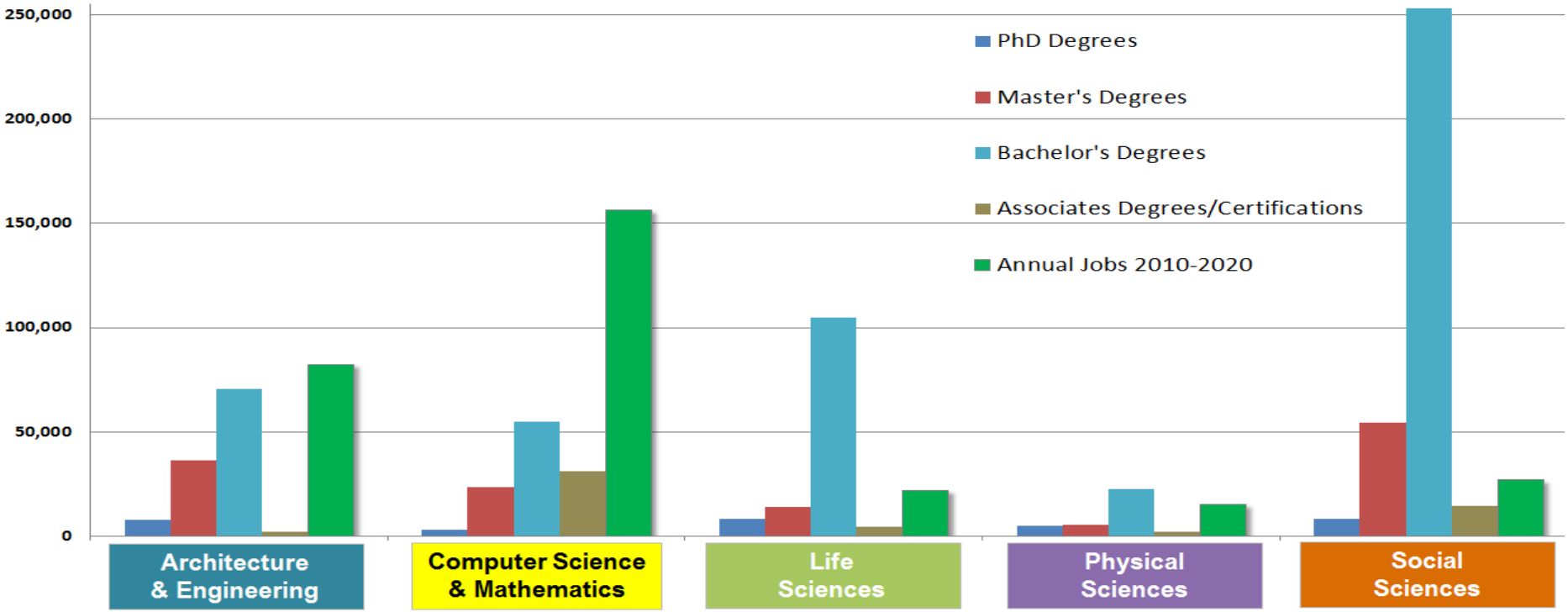
STEM degrees and jobs in the US



Students are graduating with STEM degrees for which there are fewer jobs than applicants, except for computer science.

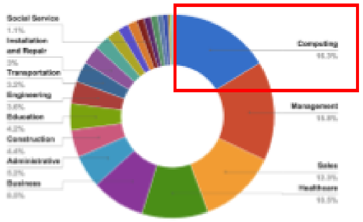
Computer science is one of the few areas where we are graduating far fewer people than are needed to fill the available jobs. Note that the green is annual jobs available. The right column shows the social sciences such as psychology, political science, sociology, where we graduate many women STEM majors, but job prospects are low.

Knowledge of computer science will help in nearly every field, this knowledge and approach to problem solving makes a person a better candidate for a job in the social sciences or physical sciences if that's where passion lies.

Source: Jobs data are calculated from the Bureau of Labor Statistics (BLS), Employment Projections 2010-2020, available at http://www.bls.gov/emp/.

We need more trained workers!

Computing jobs are the #1 source of new wages in the United States



500,000 current openings: Growing to 1.4 million by 2020. These jobs are in *every* industry and *every* state, and they're projected to grow at twice the rate of all other jobs.

Source: Jobs data are calculated from the Bureau of Labor Statistics (BLS), Employment Projections 2010-2020, available at http://www.bls.gov/emp/.

What year can I take college courses?

For more information about your High School offerings please visit www.eastern-promise.org

Name High School
Virtual Advisor- 9th to 14th Grade

www.easternpromise.org

Subject Area	9th Grade	HS Credit	10th Grade	HS Credit	11th Grade	HS Credit	12th Grade	Credit per class	Grad. requirement	College Credit
English										
Science										
Math										
Social Studies										
Health/PE										
World Language/Arts/CTE										
Electives (see course catalog for full list)										
Total	Total	0	Total	0	Total	0	Total	0	0	0

** Denotes fulfillment of college cultural literacy requirement
BOLD Denotes College Credit Courses for ASOT
Options: [illegible] courses may be used to replace HS requirements. Please consult your counselor or administrator to create your degree plan.

For technology job openings in eastern Oregon go to
https://docs.google.com/spreadsheets/d/[illegible]

Careers in Computing

US Computing Jobs > Candidates

We can fill **61%** of **1.4** million **computing jobs** available by **2020**

We can fill **32%** that require a bachelor's or advanced degree

What college courses are offered at your high school?

For more information about your High School offerings please visit www.eastern-promise.org

www.eastern-promise.org

Name of High School

BMCC Associate of Science Oregon Transfer/ Computer Science Degree (ASOT/CS)
Possible Pathway in high school

My Credits	# of Credits	BMCC ASOT/CS Degree Requirement	Courses offered at My High School	High School Teacher	College
	4	COM 111			
	3	HWS 250			
	8	MTH 251, 252			
	8	WR 121 and WR 122 (4 credits each)			
	12	Arts and Letters (3 courses) [SPAN201,202/ ENG 104/ ART/MUS/TA] (Must include at least 2 disciplines)			
	20	Social Science (5 courses) (*HST/PS/PSYCH/*SOC) *Fulfills Cult. Literacy requirement			
	12	Lab Science (3 courses) (BIO101-103, CH 101)			
	@ 26	**Possible Electives: See college link below for more information. Computer Science [illegible] MTH 111, 112			

90 Total ASOT CREDITS

All courses must be completed with a "C" or better. Up to 22 credits may be AP/Credit by Exam. This checklist is for planning purposes only.

This degree will prepare students to transfer to an Oregon public university. Computer Science (CS) is the study of programs, data, computing machinery, and how these interact. Majors in computer science are offered at EOU, OSU, OIT, PSU, SOU, UO, and WOU in Oregon. Be aware that the core CS curriculum and major options vary at the above-listed schools. Consult with a BMCC faculty adviser before beginning your first term at BMCC as a CS transfer major. [illegible]
** See BMCC course catalog page 35 at https://www.bluecc.edu/academics/academic-catalog

How much do the jobs pay? How much education do you need?

Sample Jobs Available with 2-Year AA, AAS Degree

2-Year Job Title	Projected Growth 2010-2020	2012 Average Salary	
		Annual	Hourly
Computer Support, Help Desk Specialist	18%	$46,260	$22.24
Network Technician	18%	$46,260	$22.24
Nuclear Medicine Technologist	19%	$68,560	$32.96
Medical Record, Health Information Technician	21%	$32,350	$15.55
Environmental Engineering Technician	24%	$43,390	$20.86

Sample Jobs Available with 4-Year or Advanced Degree

Job Title*	Projected Growth 2010-2020	2012 Average Salary	
		Annual	Hourly
Computer Information Systems Manager	28%	$69,160	$33.25
Network, Computer Systems Administrator	28%	$69,160	$33.25
Bioinformaticist	19%	$70,790	$34.03
Database Administrator	31%	$73,490	$35.33
Computer Security Specialist	22%	$75,660	$36.37
Web Developer, Website Manager	22%	$75,660	$36.37
Software Developer	30%	$90,530	$43.52
Software Engineer	9%	$98,810	$47.50
Computer Scientist	19%	$100,660	$48.39

Sample Jobs Available with Military Training*

Job Title*	Projected Growth 2010-2020	2012 Average Salary	
		Annual	Hourly
Network Technician	18%	$46,260	$22.24
Network Administrator	28%	$69,190	$33.25
Help Desk Specialist	18%	$46,260	$22.24
Technical Writer	17%	$63,280	$30.42
Database Administrator	31%	$73,490	$35.33
Software Developer	30%	$90,530	$43.52
Computer Security Specialist	22%	$75,660	$36.37
Multimedia Artist or Animator	8%	$58,510	$28.13
Multimedia Producer	8%	$58,510	$28.13
Web Developer	22%	$75,660	$36.37

*Upon leaving service

Do all college credits costs the same?

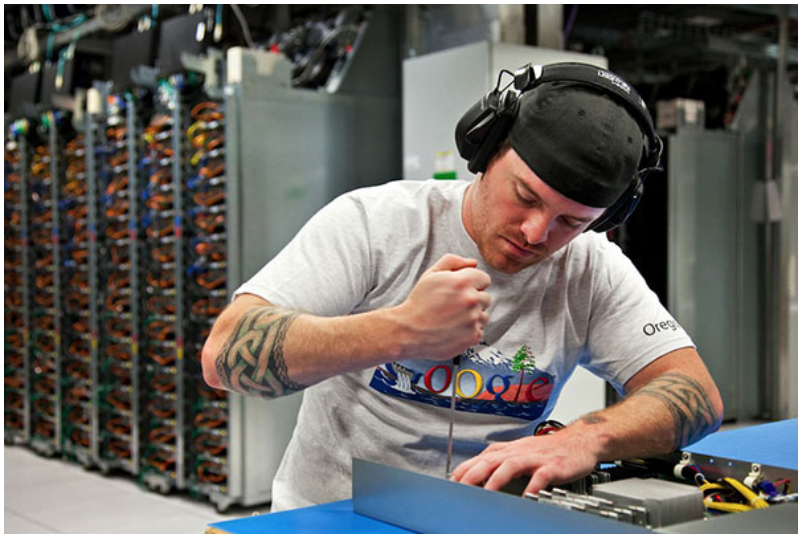
17-18 COST OF ATTENDANCE (COA) FOR **45** CREDITS PER YEAR

	COA per credit	COA per year
Eastern Promise (living at home)	$20-$31	$900-$1,335
Community College **(living at home)**	$245	$11,037
Community College (room + board)	$416	$18,724
Southern Oregon University	$491	$22,118
Eastern Oregon University	$510	$22,953
Western Oregon University	$527	$23,730
Oregon Tech	$535	$24,060
Oregon State University	$578	$26,046
University of Oregon	$588	$26,502
Portland State University	$619	$27,882
Private College		
• Linfield College		$56,066
• Willamette University		$63,568
• Whitman College		$63,704

* Some universities offer specific tuition incentives.

Working at Google

Who keeps our corner of the Internet running? We asked a couple of Googlers about a day in the life at The Dalles data center.



Mike Barham, Hardware Operations

As an operations engineer, Mike Barham receives alerts multiple times a day when servers need new parts. After getting the notification, Mike accesses an interactive software tool to pinpoint the problem. Sometimes the fix requires that he swap out a hard drive or, in this case, a motherboard. When it comes to servers that cannot be repaired, he and other team members break them up into raw materials (steel, plastic, copper, etc.) and recycle the components.

Mike came to work with Google from the Navy, where he worked as an information system technician in charge of communications with ground troops. When asked about the feeling of working inside the Internet, he comments: “The sheer scale of the data centers blows my mind.”

Hardware Operations at Google

Surrounded by the deep blue lights of our servers, Denise Harwood diagnoses an overheated CPU. It's half of her job as a repair technician to help keep equipment up-and-running at all times. The other half is working on the data security team, making sure what goes into our centers is thoroughly protected.

Denise discovered her Google job in a unique way. “It was through playing Dungeons and Dragons,” she says. While playing the game, she met a Google employee and discussed future work plans. “I had originally planned to get a degree in literature, but later changed my major to Computer Science,” she says. After graduating, she applied to our data center in The Dalles, Oregon, where she now works as part of an 80-person team.

https://www.google.com/about/datacenters/inside/locations/the-dalles/working-here.html

One of the three jobs where a woman’s median earnings are more than her male counterparts.

Eric Rolph/Wikimedia Commons

Architectural and engineering managers

Number of workers: 142,692

Percentage of female workers: 8.5

Median earnings for men: $125,849

Median earnings for women: $131,780

Women’s earning percentage: 104.7

Amazon has an opening for an **IT Support Engineer** supporting Amazon employees in northeast Oregon.

IT Support Engineers are Amazon's front line when it comes to hands-on hardware and software troubleshooting. The position supports data center employees in a variety of technical roles. Support Engineers provide hands-on support for client hardware and software on Windows, Mac, and Linux systems. They also support networking and local server resources for their site. They are the face of IT for their local customers; they serve as the liaison between site leadership and IT engineering teams. Regular activities include troubleshooting client operating systems, PC imaging and repair, network troubleshooting, project management, mentorship of junior technicians, systems administration, telecom administration, and hardware procurement.

Support Engineers must have an excellent understanding of computers (both hardware and software) and a demonstrated willingness to learn and apply new technology. They must possess superior technical aptitude, written and oral communications skills, and the ability to deal effectively with people in a wide variety of situations. This position is part of a virtual team providing remote and in-person support to data centers across North America. Previous experience exercising high levels of initiative, judgment, and diplomacy with minimal supervision is required.

Basic Qualifications

- 4+ years hands-on IT Support experience.
- 2+ years experience supporting Microsoft Windows 7
- Experience supporting Macintosh OS 10.8 or later
- Experience supporting Linux or Unix
- Understanding of networking concepts such as DNS, DHCP, Email, HTTP, SSL, OSI Model, and TCP/IP protocols and applications
- Proven skills in PC repair, troubleshooting, deployment, and liquidation

www.linkedin.com/jobs/amazon-jobs-boardman-or

Benefits of Learning Coding

You've undoubtedly heard or read somewhere that everyone needs to learn coding, right? Well, people say that for a reason!

Looking for a career? The humble computer programmer is quite possibly one of the most underrated professions out there. The demand for coders far exceeds the supply, so you'll have no troubles finding a job. In fact, it's projected to grow at a rate of 30% between 2010 and 2020. That's twice as fast as most other jobs.

And because the supply of coders around the world is so low, the pay is quite attractive too. Google and Facebook employees, for instance, are paid a base salary of ~$125K.

The world is practically crying out for more coders, as the below video explains… https://youtu.be/kgicuytCkoY

Participate in the Hour of Code™
at ACMECorp.com
https://hourofcode.com/ca/learn

www.codeconquest.com/what-is-coding/benefits/

The 'Hour of Code™' is a nationwide initiative by Computer Science Education Week[csedweek.org] and Code.org[code.org] to introduce millions of students to one hour of computer science and computer programming.