



FRANCISCO KOOLSETH The Salt Lake Tribune

Students take the stairs in the Warnock Engineering Building on the University of Utah campus. Degrees in mathematics and engineering fields generally bring higher-paying careers.

Engineers are among highest-paid jobs; librarians are among the lower-paid jobs

Degrees

Continued A1

to the data — while those working, like McLean, in the education, training and library fields have an average median salary of less than \$53,000 a year.

Engineers are among the highest-paid job sectors — management is on top — while librarians are in one of the lower-paid job sectors, with personal services ranking at the bottom in The Tribune's analysis, which looked at data on 656 occupations across 22 broad industry sectors, including art and design, construction and extraction and management.

The difference can add up over time. The average return on investment for Utahns who graduated from any of six major universities also varies widely, from about \$545,000 to more than \$1.9 million over 20 years.

The Tribune also found that, on average, it's more beneficial to get a non-degree certificate or start working right out of high school in some fields but not necessarily in every job within those sectors.

BEST RETURNS

Management — including managerial positions and serving as a legislator — has the best starting and median salary.

1. ► Utahns without experience can expect to start at about \$62,700, and the average median annual salary for management is about \$98,100.

Rounding out the top five sectors are:

2. ► Computer and mathematics with an average starting salary of \$59,471 and an average median salary of \$90,542.

3. ► Architecture and engineering with an average starting salary of \$61,666 and an average median salary of \$90,090.

4. ► Sales and sales-related jobs with an average starting salary of \$47,209 and an average median salary of \$77,480.

5. ► Life, physical and social sciences with an average starting salary of \$52,300 and an average median salary of \$75,549.

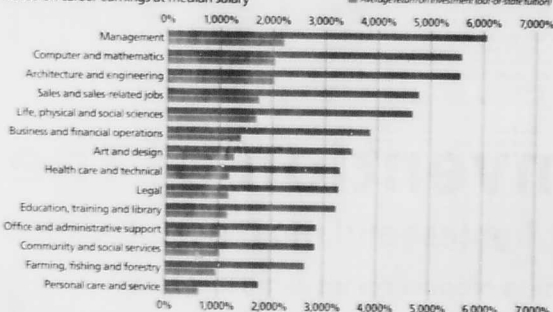
McMullin, who works in research and development on X-ray tubes, needed her degree in mechanical engineering to get her job.

That's slowly changing, she said, but her education still gives her an edge.

"If you've been a technician for several years, you can get

Return on investment

Based on career earnings at median salary



Source: Utah Department of Workforce Services

Note: The only included jobs in which most people have a bachelor's degree. Italicizes average investment for Utah State University, Southern Utah University, Utah State University, Utah Valley University, Weber State University and The University of Utah.

GRAPHIC BY CHRISTOPHER CHERINGTON | The Salt Lake Tribune

promoted to engineer," McMullin said. "I have the certificate, so I'm making significantly more money."

McMullin started out making about \$7,000 more than the average starting salary after doing an internship at her current company.

Less than five years into her career, she's making about \$10,000 more than the median salary for mechanical engineers in Utah of \$88,004. She credits her problem-solving skills and critical thinking from her education at Brigham Young University for that difference.

WORST RETURNS

On the other side of the spectrum, a career in personal services pays college graduates the least.

1. ► The only career listed as being typical for people with a bachelor's degree is recreation work, which has a starting salary of \$19,718 and a median salary of \$28,870.

Other careers in the sector pay better, though it's still the second-lowest with an average starting salary of \$32,094 and an average median salary of \$42,998.

2. ► Farming, fishing and forestry with an average starting salary of \$32,094 and an average median salary of \$42,998.

3. ► Community and social services with an average starting salary of \$34,833 and an average median salary of \$46,027.

4. ► Office and administrative support with an average starting salary of \$34,320 and an average median salary of \$46,322.

5. ► Education, training and library with an average starting salary of \$38,105 and an average median salary of \$52,323.

McLean has a bachelor's degree in math, but works in the Salt Lake City Public Library system as an associate librarian at the Marmalade Branch.

They worked in a research lab for a couple of years before deciding they wanted to do something where they interacted with people more. They also wanted to make a difference, while still working with information and data.

McLean got a master's degree in library science because they wanted the freedom to move around. They said a lot of systems are moving away from requiring a master's, but many still expect applicants to have one.

HOW THAT TRANSLATES TO RETURN ON INVESTMENT

If someone were to make the median salary for 20 years, that would mean making:

\$577,408 ► working in personal care and service.

\$858,624 ► working in farming, fishing and forestry.

\$920,539 ► working in community and social services.

\$926,432 ► working in office and administrative support.

\$1,046,460 ► working in education, training and libraries.

\$1,059,552 ► working in the legal field.

\$1,067,770 ► working in health care and other technical fields.

\$1,142,412 ► working in art and design.

\$1,251,444 ► working in business and financial operations.

\$1,590,985 ► working in life, physical and social sciences.

\$1,549,608 ► working in sales and sales-related jobs.

\$1,801,800 ► working in architecture and engineering.

\$1,810,848 ► working in computer and mathematics.

\$1,962,883 ► working in management.

The average in-state investment during four years at Utah's six public universities — Southern Utah University, University of Utah, Utah State University, Utah Tech University, Utah Valley University and Weber State University — is about \$32,400.

That's according to an analysis — by students at the Analytics Solutions Center at Utah State University — that included tuition, fees and books and supplies, but did not include the cost of living on or off campus, which could be as much as \$15,000 a year.

Out-of-state tuition and

books for four years are about \$88,450 on average across the six universities, based on the data the ASC students provided.

That means Utahns can make between 1.782% and 6.059% of in-state tuition costs over 20 years, and between 653% and 2,219% of out-of-state tuition costs.

Making 1,000% of something is the same as making 10 times as much. For example, the \$1.8 million someone could make during 20 years at the median salary is 55.9 times the in-state tuition investment for a return of 5,590%.

Returns are likely much greater because The Tribune's formula doesn't account for raises or the advantage students may get from graduating from one university compared to another.

WHEN IT COULD BE BETTER TO SKIP A FOUR-YEAR DEGREE

Utahns working in a few industries either don't need a bachelor's degree or could make more in careers where people typically don't get a four-year degree.

For example, there are 22 occupations categorized as personal care and service, and only one (recreation workers) is typically filled by people with bachelor's degrees.

Others are still on the low end of starting and median salaries, but range from a median salary of \$19,760 for entertainment attendants and related jobs to almost \$50,000 for fitness instructors.

Most Utahns do both jobs with a high school diploma or equivalent, according to the state's database.

Some people in business and financial operations also can make more without a bachelor's degree. Utahns working as insurance appraisers for automotive damage, for example, make a median of more than \$71,000 a year but typically have a non-degree certificate.

An associate's degree can also be lucrative in the health care field — like magnetic resonance imaging technologists, who make a median annual wage of \$78,000.

That's higher than the average median wage for Utahns in seven health-related fields, including athletic trainers and dietitians, where people typically have a bachelor's degree.

Megan Banta is The Salt Lake Tribune's data enterprise reporter, a philanthropically supported position. The Tribune retains control over all editorial decisions.