

Cryptologists/Cryptanalyst



Cryptologists, communicate through secret writing such as codes, ciphers or a combination of both to keep messages safe from others. While cryptographers create, **cryptanalysts**, also known as code breakers, attempt to make encryption algorithms to read the secret codes. Cryptanalysts decipher secret coding systems and decode messages for the military, political, and law enforcement agencies and other organizations. Cryptologists develop encryption to help provide privacy for people and corporations, and keep hackers out of important data systems.

EDUCATION

Most cryptanalysts have at least a bachelor's degree in math or computer science. They usually continue to take additional courses and training. In many cases an employer will provide and cover the cost of this training for qualified candidates. Additional pathways include foreign languages, criminology, information assurance and psychology.

WHERE THEY WORK

Cryptanalysts are employed by educational institutions, bank and trust companies, financial institutions, insurance companies, scientific institutions, and research agencies. They also may work for telecommunications companies, computer design firms, consulting firms, science and engineering firms, and all levels of government, including special services and intelligence agencies.

FUN FACTOIDS

Cryptography scores highly on the WorkYourWay Index because it is a growing field with lots of new jobs, particularly in the field of information security and in government defense, the military and Homeland Security. Jobs in this field scored high for their above average salaries and the opportunity to give back to society (protect fellow citizens, protect your country, solve life's mysteries, resolves significant problems).

WHERE TO FIND OUT MORE

International Association For Cryptologic Research: <http://www.iacr.org/>

National Security Agency: http://www.nsa.gov/careers/career_fields/cryptsignalysis.shtml

WHAT'S THE SALARY?

Low-end Salary: \$63,930/yr
Median Salary: \$101,645/yr
High-end Salary: \$137,780/yr

WHAT COURSES DO I TAKE?

Math Math Math

- College Algebra
- Trigonometry
- Calculus I, II, III
- Linear Algebra
- Differential Equations
- Number Theory

Computer Science
Engineering
Foreign Languages
Criminology