Cryptanalyst

Make and break codes for the NSA (National Security Agency). A math or computer science degree, a polygraph, and work you cannot talk about.

TYPICAL PAY	PAY RANGE	COST TO QUALIFY	TIME TO QUALIFY
$126,710 a year, full time	**$69k to $195k** lower end to upper end	**$44k to $72k** tuition, fees, exams, kit	**5 to 8 years** after high school

DEMAND	LICENSE NEEDED	WHERE YOU WORK
Limited job outlook	**No** no license to hold	**Secure offices at Fort Meade, Maryland, and the agency's centers in Colorado, Georgia, Hawaii, Texas and Utah**

How you get there

1. **High school** — Grade 12
   Take math as far as your school goes. Keep your record clean, because the background check looks at your whole life.
2. **Bachelor's degree** — 4 years
   Usually mathematics or computer science. The agency says its cryptanalysis program needs no particular major, but it wants proof of technical skill.
3. **Apply and interview** — Varies
   You must be a United States citizen. Some jobs add a pre-employment test. Interviews are mostly online or by phone, then comes a conditional job offer.
4. **Security and psychological screening** — Varies by candidate
   Security forms, a background investigation, a polygraph, sometimes a one or two day security interview, written personality tests and an interview with a psychologist.
5. **A development program** — About 3 years
   Formal classes, training from experienced cryptanalysts and rotating job assignments. The agency says most of its programs last three years.

Pros and cons

+ Problems in pure math that almost no other employer pays you to work on
+ Three years of paid training after you are hired
+ The agency pays for further degrees and courses
- A polygraph and a psychological assessment before any final offer
- You cannot discuss your work with family or friends
- Processing times vary, with no promise of a job at the end

Good to know

It hires from high school

The National Security Agency runs paid student programs for everyone from high school students to doctoral candidates. The pay is set by your education level, and some come with help on housing a...

It has its own school

The agency's National Cryptologic School teaches on more than 20 university campuses, four cryptologic centers and six training schools, with classes in cryptology, languages and leadership.

Optional boosts

Cryptanalysis Development Program · Cryptologic Mathematician Program · Cryptanalytic Computer Operations Development Program · Data Science Development Program

Where these numbers come from

My Next Move: Mathematicians (15-2021.00)
O*NET OnLine: Mathematicians national wages, 2025 (bottom quarter and top quarter)
O*NET OnLine: Mathematicians summary, including cryptographer as a reported job title
IntelligenceCareers.gov: National Security Agency careers

Numbers checked October 2026. Pay figures are typical full-time annual amounts in United States dollars, based on Bureau of Labor Statistics wage data and published pay scales. They vary by state, employer and experience. Tuition is for in-state students at public schools unless the card says otherwise. Sources, links and the click-through version: https://career.help/us/careers/cryptanalyst

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