

Careers: Cartographer/GEOINT Analyst

A Career as a Cartographer or GEOINT Analyst

Introduction

Cartographers measure, map, and chart the earth's surface. Their work involves everything from performing geographical research and compiling data to actually producing maps. Cartographers collect, analyze, and interpret both spatial data—such as latitude, longitude, elevation, and distance—and nonspatial data—for example, population density, land-use patterns, annual precipitation levels, and demographic characteristics. Their maps may give both physical and social characteristics of the land. They prepare maps in either digital or graphic form, using information provided by geodetic surveys, aerial photographs, and satellite data. Additionally Cartographers can become GEOINT Analysts easily.



GEOINT Analysts (Aeronautical Intelligence) analyze and exploit worldwide aeronautical source and imagery in support of safety of navigation and national intelligence goals and requirements. They collaborate with partners and co-producers across DoD and the IC to ensure that current navigation and intelligence information is available in databases and products. These analysts apply international certification standards to ensure the quality, accuracy, and currency of products and information, such as aeronautical charts, airport diagrams, and identify vertical obstructions (such as a radio tower) that would be a safety threat to flight.



Definition and Nature of the Work

Cartographers are part of a larger occupational group called mapping scientists. They collect geographic information from aerial photographs and survey data and use this information to prepare maps, charts, and drawings of large areas of the earth's surface.

Cartographers must be skillful in reading and understanding detailed photographs and drawings. They must also know how to use manual and computerized drafting instruments, photogrammetric techniques, mathematical formulas, and precision stereoplotting equipment. Above all, cartographers must be able to render accurate representations of the data they have collected.

Education and Training Requirements

A bachelor's degree in engineering or in a physical science is a requirement for a career in cartography. Courses in surveying and measurements, drafting, and mathematics are recommended. Computer training is essential.



Some fieldwork may also be required. Cartographers must be precise and accurate, have good interpersonal skills, and be able to visualize objects, distances, sizes, and other abstract forms.

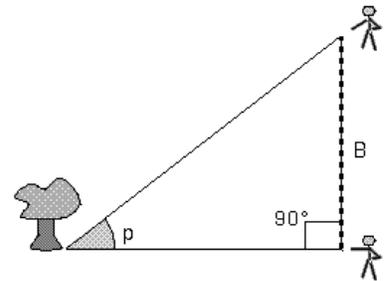
At Civil Air Patrol, the volunteer auxiliary of the U.S. Air Force, we're helping develop tomorrow's aerospace workforce.

Cartographers compile geographic, political and cultural information in order to prepare maps. Along with gathering data, they analyze and interpret their findings to create maps that display physical features, social characteristics or a combination of both. Becoming a cartographer entails completion of a bachelor's degree program and, in some states, surveyor licensure.

Surveyor - Cartographer: How to Begin a Career in Cartography

Step 1: Complete High School

High school students interested in cartography may prepare for the career by taking geometry and trigonometry. These courses familiarize students with coordinates and dimensions, which are important aspects of surveying. Students may also benefit from attending geography and computer science classes.



If we know one side (B) and one angle (p) of a right triangle, we can derive the length of the other two sides.

Step 2: Earn Bachelor's Degree

Most jobs in cartography require a bachelor's degree in surveying, cartography, surveying engineering or another related major. Some colleges and universities offer, for example, bachelor's degree programs in cartography and geographic information systems. These programs focus on data collection, advanced mathematics and mapping techniques. Courses often include remote sensing, analytic geometry and programming for cartography.

Step 3: Take an Initial Licensing Exam

According to the U.S. Bureau of Labor Statistics (BLS), some states require cartographers to obtain surveyor licensure to practice in the profession (www.bls.gov). The licensing process begins with passage of the Fundamentals of Surveying (FS) exam, administered by the National Council of Examiners for Engineering and Surveying (NCEES). This closed-book exam assesses individuals in math, science and basic industry principles, such as field data acquisition and graphical communication (www.ncees.org). Students may sit for the FS exam prior to college graduation.

Links to more Information click below:

https://erecruit.nga.mil/psp/EXPROD_1/EMPLOYEE/H RMS/c/HRS_HRAM.HRS_CE.GBL?Page=HRS_CE_J OB_DTL&Action=A&JobOpeningId=20112388

<http://www.intermap.com/en-us/company.aspx>

<http://www.1-3com.com/careers/>

<http://geologyonlinecourses.com/cartography-gis-degree-programs/>



Courtesy: [NGA, NASA]

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