



WHAT IS A CAREER IN BIOTECHNOLOGY LIKE?

Biotechnology is the integration of engineering and technology to the life sciences.

Biotechnologists frequently use microorganisms or biological substances to perform specific processes or for manufacturing. Examples include the production of drugs, hormones, foods and converting waste products.

There are many sub-branches involved in the biotech industry. A few of the more common branches include; molecular biology, genetic engineering, and cell biology.

A new and exciting sub-branch requiring biotechnologists is the field of nanotechnology. Nanotechnology gives us the capability to engineer the tiniest of objects, things at the molecular level. Nano means a billionth of a specific unit in Greek. Nanotechnology includes the study and manipulation of materials between 1 and 100 nanometers.

To give you an idea, DNA is approximately 2.5 nanometers. Red blood cells are 2.5 micrometers (1,000 times larger). And a sheet of paper is about 100,000 nanometers thick!

As you can imagine, it is very difficult to scale and mass produce objects within the realm of nanotechnology. Their minute size makes them nearly impossible to manipulate. But scientists and engineers have teamed up to make the seemingly impossible a reality.

Which means those with the proper training will be highly sought after in the future. The National Science Foundation estimates that the U.S. alone will need up to 1 million nanotechnology researchers. It is estimated that the need for nanotechnology workers will reach 2 million by 2015.

Therefore, if you're considering getting into the field of biotech, you may want to gear your background in nanotechnology if your school offers it or seek employment in this exciting new career field after graduating.

No matter what sub-branch you wind up specializing in, biotechnologists often collaborate with others in the laboratory and bounce ideas off one another. This can create a pleasant work environment; one that involves sharing with others and working together to achieve a great goal.

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