

BIOINFORMATICS



Bioinformatics is the science of collecting and analyzing complex biological data such as genetic codes.



Studying bioinformatics develops a foundation in the principles of computing and biology.



The Bioinformatics A.S. is a 2+2 program with Athens State University.



MOTLOW STATE

motlow.edu/bioinformatics

BIOINFORMATICS

A Bioinformatics Scientist with an advanced degree can make up to \$130K per year.

(Occupational Outlook Handbook)

WHAT IS BIOINFORMATICS?

Bioinformatics is the science of collecting and analyzing complex biological data such as genetic codes.

Bioinformatics is a subdiscipline of biology and computer science concerned with the acquisition, storage, analysis, and dissemination of biological data, most often DNA and amino acid sequences. It is an interdisciplinary field that develops methods and software tools for understanding biological data, in particular when the data sets are large and complex.

Common uses of bioinformatics include the identification of candidates' genes and single nucleotide polymorphisms (SNPs). Often, such identification is made with the aim of better understanding the genetic basis of disease, unique adaptations, desirable properties (esp. in agricultural species), or differences between populations.

Scientists know a lot about genetics. For example, your body's DNA has three billion pairs of chemicals. Scientists study biological data. They use algorithms and machine learning to see patterns in the data, which leads to breakthroughs in medical treatment. Studying bioinformatics develops a foundation in the principles of computing and biology, with courses in mathematics, chemistry, computing, and biology.

Career Opportunities

Our Associate of Science (A.S.) Degree in Bioinformatics qualifies you for transfer into the 2+2 program with Athens State University in Athens, Alabama. Completion of a four-year baccalaureate program prepares you for further study toward a master's degree or higher. Students who hold a higher degree could anticipate a career in any one of the following areas:

- Bioinformatics Scientist (\$60-130K/year)
- Data Scientist (\$54-77K/year)
- Computational Biology (\$38-160K/year)
- Research Scientist (\$50-80K/year)
- Biostatistician (\$50-80K/year)
- Microbiologist (\$50-75K/year)

(Occupational Outlook Handbook)

The Bioinformatics A.S. is a 2+2 program with Athens State University. The 2+2 program of study leads to the Associate of Science (A.S.) degree, Bioinformatics Emphasis, from Motlow and a Bachelor of Science (B.S.) degree in Biology - Bioinformatics Option from Athens State University.

