Bioinformatics – CSCI 474  
MTWF, 11-11:50am

An interdisciplinary course for students (already declared majors) in computer science (CS), biology (Bio), chemistry, math/CS, and math/Bio. Learn about, develop & gain hands-on experience with tools to process, visualize and analyze biological data.

For CS students, bio and/or chemistry experience is not necessary. For non-CS students, programming experience is not necessary.

Sample Topics

- How is genetic data interpreted and analyzed to infer the prevalence of a disease in a community?

- Learn to use existing software and build custom programs to explore genetic similarities among different species.

- How do pharmaceutical companies use computer software to aid in drug design?

- Learn to use molecular dynamics to simulate movement of biological molecules.

- How do mutations lead to serious diseases?

- Develop programs to analyze biological data to make predictions about the severity of a mutation.

The course will consist of 4 weeks of lectures and labs (2 labs and 2 lectures each week), followed by a significant 6-week group project. Course grades are determined by lab scores, article review summaries, and the final project. Registration is by instructor permission. If you are keenly interested, please contact filip.jagodzinski@wwu.edu, or stop by CF461 Mon-Wed 11am-noon.