

Computational Biology — Graduate Certificate

Offered by the Department of Biological Sciences, this certificate is designed to provide trainees with a broad understanding and appreciation of the utility of computation in relation to “Big Data”, or large data sets that can only be analyzed with an advanced set of computational skills towards revealing patterns, trends, and associations pertaining to biological and life science phenomena. This certificate program requires 18 credit hours of coursework to be completed within a period of three years. All trainees in the certificate program will complete 12 credit hours of required coursework. Trainees will select (at least) six additional credit hours of coursework from a given list that heavily utilize computational approaches and tailored to their specific research interests.

| Code | Title | Hours |
|---|---|----------|
| Required coursework (12 credit hours): | | |
| BIOL 6800 | Introduction to Computational Biology | 3 |
| STAT 7000 | Experimental Statistics I | 4 |
| BIOL 7180 | Scripting for Biologists | 3 |
| BIOL 7970 | Special Topics (Computational Biology Colloquium) | 2 |
| Selected elective coursework (6 credit hours): | | 6 |

From approved list of courses that heavily utilize computational approaches. The list of potential electives is expected to grow and evolve given development of new courses tied to continuing new faculty hires at Auburn University.

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| Total Hours | 18 |
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Trainees who successfully complete this certificate program will exhibit proficiency in the comprehension, planning and implementation of computationally intensive experiments and analyses of biological data originating from various sources and should be well-positioned for finding positions in academia, government or the private sector.