

First Year Research Award: **Physics/Environmental Science**

Faculty Supervisor: **Professor Elizabeth George**

Position Title: First Year Research Scholar in Physics/Environmental Science

Criteria: The Wittenberg University Department of Physics will offer a First Year Research Award for the academic year 2022 - 2023 to an incoming student to work with Dr Elizabeth George. This student will have a demonstrated academic ability and/or research interest in Physics and/or Environmental Science.

Expectations: FYRA Scholarship recipients will devote between 6 and 8 hours per week across their first year to FYRA program and their research-related project, according to the FYRA Learning Contract agreed upon by the sponsoring professor and the scholarship recipient. Recipients will also be expected to participate in a regular meeting of FYRA recipients, present their results in an appropriate forum and submit a copy of their presentation to the appropriate university office. FYRA Scholarship recipients will also participate in an assessment of the FYRA program. (The FYRA Scholarship is not part of a student's work study award.)

Research Activity: The First Year Research Award recipient will work with Dr. Elizabeth George, Professor of Physics, on an ongoing project to model streamflow in river systems, as agreed upon in the FYRA Learning Contract. The FYRA Scholarship recipient will have the opportunity to use professional-quality hydrology software ([HEC-RAS](#)) to create computational models of the flow behavior of a local stream system (Buck Creek) that is undergoing restoration. We will use these models to investigate the effectiveness of specific restoration efforts and to guide future work to improve the functioning and health of the stream environment. The recipient will be mentored in research communication skills, and will be given the opportunity to present their work in an appropriate venue. The recipient should have good critical and quantitative thinking skills, a willingness to learn to use software tools, a curiosity about how things work, and an interest in collaborative work at the interface between environmental science, physics, and environmental engineering.