**About Science Exploration**

**Mission:**

With the help of faculty and staff from across the College of Science and other departments at RIT, Science Exploration students will:

* Plan the effort and self-organize into teams (likely to be in the fields of physics, chemistry, biology, imaging science, and mathematics/computer science)
* Conduct background research to assess technology option
* Propose possible specific science studies in a variety of fields that will enable achieving the stated goal
* Analyze the risks/benefits of the various approaches and select the most promising approaches
* Conduct the selected studies and validate the results
* Consolidate the results into a single, scientific study
* Present the results at conferences both at RIT and possibly at national conferences

**Outcomes:**

This approach to interdisciplinary technical education emphasizes real-world, hands-on problem solving by student-led teams. It offers participating students a degree of autonomy and responsibility rarely found at the freshman level. Students who participate in this project will demonstrate the following outcomes:

* A general understanding of the foundational concepts of several fields of science
* An in-depth knowledge of at least one aspect of one of these fields
* A working knowledge of the principles of systems engineering and team research
* Proficiency in oral and written technical communication
* Appreciation for the value of interdisciplinary teamwork in technical disciplines
* Innovation and creativity in their approach to problem solving

**Evaluation Plan:**

The evaluation of student performance will be based on the quality of their teamwork, scientific thinking, and project execution. The evaluations will be a combination of peer evaluations within the cohort and external evaluations by the faculty and external participants using group interviews and classroom observations. Students and teams will prepare and deliver formal presentations to the group through the year at key milestones.

Advisory Committee:

David Barth-Hart

Roger Dube

André Hudson

Karl Korfmacher

Michael Kotlarchyk

Andrew Robinson

David S. Ross

Carl Salvaggio

Paul Shipman