

Piedmont Virginia Community College Sophomore Capstone Research Project

- Science 299 – Required for A.S. in Science degree (Biology, Geology, Chemistry, Physics)
- Semester-long independent research project & poster presentation



Institutional Organization of Science 299

- Faculty coordinator (bearing teaching credit)
 - 3 organizational meetings throughout semester,
- Individual faculty members & lab support staff supervise students
 - 2-3 students per faculty . . . though highly variable
 - Course offered Fall & Spring
 - 6 students Fall 2011,
 - 18 students Spring 2012
- Student outcomes:
 - 15 of 18 students from Spring 2012 course transferring to 4-yr schools in Fall 2012 and planning science majors

A sample of projects (2012)

- Gina Baldi (Biology): The Efficacy of Garlic as an Antimicrobial against *Escherichia coli*, Ampicillin-Resistant *Escherichia coli* and *Staphylococcus aureus*.
(transferring to University of Virginia; summer NIH research student at Johns Hopkins)
- Martin Edwards (Chemistry): Synthesis of Prilocaine Hydrochloride from Toluene
(transferring to University of Virginia)
- Jolie Nyiramahirwe (Biology): The Effects of pH on Termites and Protozoans
(transferring to Virginia Commonwealth University; summer researcher at Univ. Virginia's Astrochemistry program for minority students)
- Shereena Sylvester (Biology): Interactions between Antibiotics and T4 Bacteriophage against *E. coli*
(post-baccalaureate student, enrolling in graduate health program)
- Jonathan Vaughan (Geology): The Effect of Density on the Velocity and Depositional Patterns of Turbidity Currents
(transferring to James Madison University, planning geology major)

** No physics this year, but we have had physics projects in the past