Life Sciences Research Certificate

www.Biology.Pitt.edu
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Overview
The Life Sciences Research Certificate program includes four terms of inquiry-based research in lab or field settings under faculty mentorship and overseen by an oversight committee. Before declaring the certificate, students must complete two terms of introductory biology courses, such as BIOSC 0150 and BIOSC 0160 Foundations of Biology 1 and 2, with a letter grade of C or better. Students must also have completed two credits of faculty-mentored research and provide a letter of support from the faculty mentor, and they must have a cumulative GPA of not lower than 2.75 after the research has been completed.

The certificate program requires at least 20 credits, described as follows. Satisfactory completion of the certificate satisfies the Dietrich School of Arts and Sciences requirement of a related area.

Research courses
Students must complete three additional terms of research, of a total of at least eight credits in research courses. The final two terms of research must be with the same faculty mentor. Research courses include:
- BIOSC 1903 Undergraduate Research
- BIOSC 1904 Undergraduate Honors Research
- NROSCI 1901 Independent Study
- NROSCI 1961 Thesis Research

Quantitative skills courses
Select three courses from the following list
- BIOSC 1545 The Mathematics of Biology
- MATH 0220 Analytical Geometry & Calculus 1
- MATH 0230 Analytical Geometry & Calculus 2
- MATH 0280 Introduction to Matrices & Linear Algebra
- MATH 0290 Applied Differential Equations
- MATH 1380 Math Biology
- STAT 1000 Applied Statistical Methods
- STAT 1221 Applied Regression
- STAT 1211 Applied Categorical Data Analysis
- STAT 1231 Applied Experimental Design
- STAT 1241 Applied Sampling
- STAT 1311 Applied Multivariate Analysis
- STAT 1321 Applied Time Series
- BIOST 2041 Introduction to Statistical Reasoning
- BIOST 2011 Principles of Statistical Reasoning
- BIOST 2012 Bayesian and Empirical Bayes Statistics

History and Philosophy of Science courses
Select one course from the following list
- HPS 0427 Myth and Science
- HPS 0437 Darwinism and its Critics
- HPS 0430 Galileo & Creation of Modern Science
- HPS 0515/HIST 0089 Magic, Medicine, & Science
- HPS 0611 Principles of Scientific Reasoning
- HPS 1508 Classics in the History of Science
- HPS 1620 Philosophy of Biology
- HPS 1625 Philosophy of Medicine
- HPS 1508 Classics in the History of Science
- HPS 1670 Philosophy of Neuroscience
- HPS 1800 Special Topics in History and Philosophy of Science

Research methods courses
Select two of the following courses
- BIOSC 1906 Research Methods: Communication in Life Sciences Research
- BIOSC 1907 Research Methods: Under the Hood of Life Sciences Research
- NROSCI 1014 or NROSCI 2014 Speaking of Science
- NROSCI 1410 or NROSCI 2410 Translating Neuroscience

Grade Requirements
A minimum GPA of 2.0 is required in each course that counts toward the certificate.

Satisfactory/No Credit Option
No course that counts toward this certificate may be taken on the S/NC basis.

For more information
Visit the certificate’s Web page at www.Biology.Pitt.edu/Undergraduate/ResCert for more details on the research projects and other requirements.