|  |  |  |  |
| --- | --- | --- | --- |
| **BIOSC Course #** | **Cr** | **Grade** | **Notes** |
| 0150 Intro Bio I  (UHC0715, 0190) | 3 |  |  |
| 0050 Intro Bio Lab I (0057, 0190) | 1 |  |  |
| 0160 Intro Bio II (UHC0716, 0191) | 3 |  |  |
| 0060 Intro Bio Lab II (0191, 0067) | 1 |  |  |
| Mentored Research in Faculty Lab  Advisor name: | 2 |  | Lab Dept: |
| Letter of support from faculty advisor? | Y/N |  |  |
| Research lab is Certificate-approved? | Y/N |  | Faculty apply for approval? if = N |
| Cum GPA (if ≤ 2.75 need faculty support to discuss) |  | Cum GPA: | Support needed? Y/N |

***Prerequisites:***

***Research:***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Research** | **Term** | **Cr** | **Course # or Equiv.** | **Signed Prospectus & report** | **Grade** |
| Semester 1 |  | 2 |  | Y/N |  |
| Semester 2 |  | 2 |  | Y/N |  |
| Semester 3 |  | 2 |  | Y/N |  |
| **List research advisor & program if away:**  **Sem 1:**  **Sem 2:**  **Sem 3:** | | | | | |

***Courses:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Quant. skills** | **Course #** | **Cr.** | **Grade** | **Notes** |
| Course 1 |  |  |  |  |
| Course 2 |  |  |  |  |
| Course 3 |  |  |  |  |
| **HPS** |  |  |  |  |
| Course |  |  |  |  |
| **Research Methods** |  |  |  |  |
| Course 1 (Biosc 1906 or Nrosci 2014) |  |  |  |  |
| Course 2 (Biosc 1907 or Nrosci 2410) |  |  |  |  |

***Presentations:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Event** | **Mtg name** | **Date** | **Abstr?** | **Poster/Talk?** |
| Scientific Meeting #1 |  |  | Y/N | P/T |
| Scientific Meeting #2  (outside Dept.) |  |  | Y/N | P/T |

***Manuscript title:***

***Portfolio Checklist:***

|  |  |
| --- | --- |
| **Item** | **Date submitted** |
| Student Application |  |
| Faculty Letter of Support |  |
| Semester report & prospectus 1 |  |
| Semester report & prospectus 2 |  |
| Semester report & prospectus 3 |  |
| Presentation 1 abstract |  |
| Presentation 1 slides/poster |  |
| Presentation 2 abstract |  |
| Presentation 2 slides/poster |  |
| Student-authored Manuscript |  |
| Publications (if applicable) |  |

***Course choices and other information***

**Quantitative Skills Courses - Statistics/Math:**

*Complete three courses from this list (9 credits):*

BIOSC 1545: Mathematics of Biology

MATH 0220: Calculus I

MATH 0230: Calculus II

MATH 0280: Intro 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

Graduate level options for the certificate:

BIOST 2041: Introduction to Statistical Reasoning

BIOST 2011: Principles of Statistical Reasoning

BIOST 2012: New advanced course

**History and Philosophy of Science Courses:**

*Complete one course from this list (3 credits)*

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 1620: Philosophy of Biology

HPS 1625: Philosophy of Medicine

HPS 1508: Classics in the history of Science

HPS 1653: Introduction to Philosophy of Science

HPS 1670: Philosophy of Neuroscience

HPS 1800: Special Topics in HPS

**Research Methods courses:**

*Complete two Research Methods courses:*

one in research communication and one in research mechanics; it is recommended that research courses be in student’s major department.

BIOSC 1906 Research Methods: Communication in Life Sciences Research

BIOSC 1907 Research Methods: Under the Hood of Life Sciences Research

NROSCI 2014 Speaking of Science

NROSCI 2410 Translating Neuroscience

Be enrolled in the Certificate & performing research in a Certificate-approved lab during the same term that you are taking these courses.

*Other Research Methods courses* must be approved in advance by the Research Certificate Oversight Committee (RCOC).

**Optional Off-campus Research Term:**

**In advance,** submit a 1-page description of project and research environment plus a letter to RCOC from the research advisor confirming your commitment to ≥140 hours of research activity.

**Manuscript:** Submit paper describing the research completed in final research experience (spans at least two consecutive terms). Paper is in the form of a research manuscript, including Abstract, Introduction, Materials and Methods, Results, Discussion, Acknowledgements, and References. Must be submitted to the faculty mentor and the RCOC by the last week of classes of your final term (before finals week). Manuscript must be approved by the Faculty Sponsor & RCOC. The same final research paper may be considered for satisfaction of both Departmental Honors and the Research Certificate, provided it meets other requirements of the Department.

**Portfolio Documentation:** Upon registration for the Certificate,students mustbegin and maintain thereafter an electronic portfolio to document their progress towards Certificate completion. Each proposal, presentation, report, and any other Certificate-related materials must be collated in the Portfolio. The portfolio allows students, faculty, and advisers to monitor progress towards the Certificate, and provides the coherent documentation of research proficiency for application for either employment or graduate school admission.

**GPA requirements:** You must remain in good academic standing (minimum cum. GPA 2.00); if students have a cum. GPA ≤2.75 after completing the initial term of research, the faculty sponsor for that student must assess whether the student is likely to meet the rigorous demands of the Certificate in writing their letter of support.

**Advising:** Majors in the Departments of Biological Sciences or Neuroscience will be advised through their departments. Students outside of these departments will be assigned an advisor within one of these departments.