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| **Biology Graduate Courses** |

*The minimum curriculum for Ph.D. students consists of six Graduate Core Courses, two approved Graduate Elective Courses, three lab rotations and data talks, and participation in the Research and Scholarship Integrity Program. Graduate students are encouraged to take additional seminar courses.*

***Graduate Core Courses***

BIOL6110 Advanced Genetics (Fall, 2 credits)

BIOL6140 Graduate Molecular Biology (Spring, 2 credits)

BIOL6150 Advanced Cell Biology (Spring, 2 credits)

BIOL6160 Graduate Bioinformatics (Fall, 2 credits)

BIOL6180 Scientific Proposal Writing (Spring, 2 credits)

BIOL6350 Graduate Biochemistry (Fall, 2 credits)

BIOL7010 Graduate Research Experience (Lab Rotation)

(Fall & Spring, 3 credits)

***Approved Graduate Electives***

BIOL5060 Recombinant DNA Technology (Spring, 3 credits)

BIOL5070 Microbial Community Ecology (Spring, 2 credits)

BIOL5130 Environmental Disruptors of Development (Spring,3 credits)

BIOL5150 Vaccine Development & Public Health (Fall, 3 credits)

BIOL5160 Inflammation in Health & Disease (Fall, 3 credits)

BIOL5230 Immunity & Infectious Disease (Spring, 3 credits)

BIOL5330 Virus Infections & Cellular Transport (Fall, 3 credits)

BIOL5370 Literature for Neurological Diseases (Fall/Spring, 3 credits)

BIOL5380 Topics in Biomechanics (Spring, 3 credits)

BIOL5420 Cancer as a Metabolic Disease (Fall/Spring, 3 credits)

BIOL5430 Genomics & Personalized Medicine (Spring, 3 credits)

BIOL5440 Synthetic Biology (Spring, 2 credits)

BIOL5450 Advanced Lab in Cell Imaging (Fall/Spring, 2 credits)

BIOL5460 Topics in Microbial Pathogens (Spring, 3 credits)

BIOL5630 DNA Viruses and Cancer (Spring, 3 credits)

BIOL5700 Biology of the Nucleus (Fall, 3 credits)

***Additional Courses\****

Departmental Seminar (2 credit)

Doctoral Continuation (1 credit)

\*see Associate Director of Administrative & Graduate Services for registration

***Program Timeline***

**YEAR ONE:**

BIOL6110 Advanced Genetics

BIOL6350 Graduate Biochemistry

BIOL6140 Graduate Molecular

Biology

BIOL6150 Advanced Cell Biology

Approved Elective or Seminar

3 Lab Rotations (BIOL7010

Graduate Research Experience)

Teaching Assistantship

Summer Research Assistantship

**YEAR TWO:**

BIOL6160 Graduate Bioinformatics

Approved Elective or Seminar

BIOL6180 Scientific Proposal

Writing

Thesis Research

Ph.D. Candidacy Exam

**YEAR THREE:**

Thesis Research

Remaining approved Graduate

Seminars

Optional additional courses

**YEARS FOUR - FIVE:**

Thesis Research

Remaining approved Graduate

Seminars

Completion of Ph.D. Dissertation

Public Presentation of Ph.D. Thesis

Defense of Ph.D. Thesis