Genomics/Bioinformatics

(Some courses below may serve as Directed Electives or Guided CAS Electives, but the total for both categories must be at least 29 credits and 11 credits must satisfy guided CAS electives.)

Course ***Term Completed & Grade***
(for advisor's use)

Biochemistry/Molecular Biology: Choose either:
_____ BI 314. Cell and Molecular Biology (4) _____
_____ or BB 331. *Introduction to Molecular Biology (3)

Computer Science: Choose either:
_____ BOT 476. Introduction to Computing in the Life Sciences (3)
_____ or CS 161, CS 162. Introduction to Computer Science I, II (4,4) _____

Genomics and Bioinformatics: take both:
BB 485 Applied Bioinformatics (3) _____
BOT 475. Comparative Genomics (4) _____

Statistics:
ST 352. Introduction to Statistical Methods (4) _____

Organismal Biology Elective: *Choose at least 3 credits of upper division coursework related to the group of organisms that your research concerns. Examples could include*:
_____ BOT 321. Plant Systematics (4)
_____ or MB 302. General Microbiology (3)
_____ or PBG/CSS/HORT 430. Plant Genetics (3)
_____ or PBG/CSS/HORT 450. Plant Breeding (4)
_____ or Z 361. Invertebrate Biology (3)
_____ or other _____

Specialization and Breadth Courses
Choose courses from the lists below, or other upper-division courses approved by research mentor, for a total of 29 option credits.
General electives:
_____ BB 481. Biophysics (3)
_____ BB 494. Biochemistry Laboratory (3)
_____ BB 499. Special Topics: Biocomputing: Molecular Simulation (3)
_____ MB 310. Bacterial Molecular Genetics (3)
_____ MB 311. ^Molecular Microbiology Laboratory: A Writing Intensive Course (3)
_____ MB 668. Microbial Bioinformatics and Genome Evolution (4)

If your interest is in biological data mining, suggested choices include:
_____ CS 261. Data Structures (4)
_____ CS 325. Analysis of Algorithms (4)
_____ CS 420. Graph Theory with Applications to Computer Science (3)

If your interest is in modeling, suggested choices include:
_____ MTH 254. Vector Calculus I (4)
_____ MTH 256. Applied Differential Equations (4)
_____ MTH 341. Linear Algebra I (3)
_____ ST 411, ST 412. Methods of Data Analysis (4,4)
_____ ST 421, ST 422. Introduction to Mathematical Statistics (4,4)
_____ ST 441. Probability, Computing, and Simulation in Statistics (4)
Total = 29

_____ _____
Mentor's Signature Date