

Quantitative Sciences Major Checklist: Biology

Name: _____

ID #: _____

Academic Advisor: _____

Date: _____

Core Courses

*Required for all QSS majors in the Biology track declared Fall 2019 or later
AP Credit may not be substituted for CHEM 150 / CHEM 202 or for PHYS 151 / PHYS 152*

Course number & title			Semester & Year	Grade	Credits
MATH	111†	Calculus I		X	3
MATH	221†	Linear Algebra		X	X
QTM	110	Introduction to Scientific Methods			3
MATH	210	Advanced Calculus for Data Sciences			4
QTM	150	Intro to Statistical Computing I			1
QTM	151	Intro to Statistical Computing II			1
QTM	210	Probability & Statistics			4
QTM	220	Regression Analysis			4
BIOL	141 & 141L	Foundations of Modern Biology I			5
BIOL	142 & 142L	Foundations of Modern Biology II			5
CHEM	150 or 202*	Structure and Properties or Principles of Reactivity			
PHYS	151 or 152	Physics for Science & Engineering I or II			4

*Previously numbered CHEM 141 and CHEM 142

† MATH 111 and MATH 221 do not count towards major GPA; MATH 111 counts towards 50 cr. requirement; MATH 221 does not count towards 50 cr. requirement

Elective Courses

QTM electives include 300- and 400-level lecture and seminar style classes

QTM 398R, 496R, 497R, 498R and 499R are not considered upper-level electives

BIOL electives must be selected from the table on the following page and can include the required courses of the track option not chosen

Course number & title			Semester & Year	Grade	Credits
QTM					
QTM					
QTM					
BIOL					
BIOL					

Choose either Track 1 or Track 2

Track 1: Neurobiology

Course number & title			Semester & Year	Grade	Credits
BIOL	360	Introduction to Neurobiology			
BIOL	450	Computational Neuroscience			

Track 2: Population Biology, Ecology, & Evolution (PBEE)

Course number & title			Semester & Year	Grade	Credits
BIOL	241	Evolutionary Biology			
BIOL	247	Ecology			

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Expected Graduation:
Semester & Year

Total credit hours completed:
124 academic credit hours + 2 PE + HLTH100
needed for graduation

Credits toward QSS:
50+ needed to earn degree

QSS Biology Track Electives

Acceptable elective courses are listed below

PHYS/BIOL 212	Computational Modeling in the Sciences	BIOL/CHEM 330	Chemistry, Biology, & Molecular Modeling
BIOL 223	Developmental Biology	BIOL 336	Human Physiology
BIOL 241	Ecology	BIOL 360	Introduction to Neurobiology
BIOL 247	Evolution	PHYS 434	Physical Biology
BIOL 250	Cell Biology	CHEM 435	Molecular Simulation Chem Bio
BIOL 264	Human Genetics	BIOL 450	Computational Neuroscience
BIOL 301	Biochemistry	BIOL 455	Immunology & Disease
NBB 302	Behavioral Neuroscience	BIOL 463	Population Biology & Evolution of Disease

Note

Other Biology-related elective classes may be taken in consultation with a **Biology faculty advisor**. Students can also consider other combinations of the 4 elective classes, outside of the Neurobiology and PBEE options described above. This can be planned with guidance from **track advisors**.

Biology Faculty Advisors for QSS Students

- Rustom Antia
- Dieter Jaeger
- Ilya Nemenman
- Jaap de Roode
- Gordon Berman
- Bruce Levin
- Astrid Prince Jaap de Roode
- Sam Sober
- Ronald Calabrese
- Robert Liu
- Leslie Real