

Traineeship - Ph.D. Roadmap (Example)

For students entering into QuEST program fall 2021 or later.

	Fall	Credits	Spring	Credits	Summer	Course Number	QuEST Program Requirements	Credits
Year 1	Modeling Complex Systems	3c	QuEST Seminar	-	Annual Retreat (August)	CS/CSYS 302	Modeling Complex Systems	3
	Quantitative Elective*	3-4c*	Quantitative Elective*	3-4c*	Orientation & Coding Workshop*	BIOL 381A	QuEST Seminar	1
	QuEST Seminar	1c	Department /Research Requirement	1-4c	JEDI Training	CS 375	QuEST Data Lab (twice)	6
Year 2	Quantitative Elective*	3-4c*	QuEST Data Lab	3c		BIOL 381G	Applied Internship	1
	QuEST Seminar	-	Department/Research Requirement	1-5c		SINT 290X	Internship (summer enrollment only)	0
	Department /Research Requirement	1-5c				See table*	Quantitative Electives*	6 - 8
Year 3	QuEST Seminar	-	Applied Internship	1c	Applied Internship	Online course	Responsible Conduct of Research	0
	Department /Research Requirement	3-7c	Department / Research Requirement	9c			Total	17 - 19
Year 4	QuEST Seminar	-	QuEST Data Lab	3c		*Disciplinary and Interdisciplinary Electives Courses -		
	Department Requirement	4c	Department / Research Requirement	1-5c		Course	Description	
	Research Requirement	4c	Department / Research Requirement	9c		BIOL 371 (1c)	Foundations of Evolution	
Year 5	QuEST Seminar	-	Department / Research Requirement	9c		BIOL 371 (1c)	Foundations of Ecology	
	Department /Research Requirement	2-8c				BIOL 296/372A (2c)	Biostatistics	
						BIOL 271 (3c)	Evolution	
						BIOL 381A (4c)	Computational Biology	
						BIOL 254 (4c)	Population genetics	
						BIOL/PBIO 381 (4c)	Ecological Genomics	
						CSYS/BIOL/CS 352 (3c)	Evolutionary Computation	
						CSYS/MATH 268 (3c)	Mathematical Biology & Ecology	
						CSYS/MATH 300 (3c)	Principles of Complex Systems	
						CSYS/PBIO 295 (3c)	Ecological and Evolutionary Modeling	
						CSYS/STAT/CE 369 (3c)	Applied Geostatistics	
						GEOG 246 (3c)	Climatology & Natural Hazards	
						MMG 232 (3c)	Bioinformatics	
						NR 242 (1-3 c)	Adv. Geospatial Techniques	
						NR 243 (3c)	GIS Practicum	
						NR 395 (3c)	Geospatial Computation	
						NR 395 (3c)	Adv. Quantitative Thinking in the Life Sciences	
						PSS 381 (3c)	Quantitative Thinking in the Life Sciences	
						STAT 200 (3c)	Med Biostatistics & Epidemiology	
						STAT 287 (3c)	Data Science I	
						STAT 387 (3c)	Data Science II	

***QuEST Interdisciplinary training elements throughout the program include the following.**

- Annual Retreat - fall semester (day and a half)
- Justice, Equity, Diversity & Inclusion Training
- Interest Group Networks (occurs in Seminar)
- Applied Internship - (8 - 10 weeks) Spring / Summer semester of 3rd year
- Orientation for First-year Trainees
- Coding Workshop (* optional, but recommended)
- Community building activities
- Social Hour - weekly

*QuEST course specific requirements for traineeship are highlighted in orange.

*Quantitative Electives: credit-based for traineeship; between 6-8 credits are needed total.

*Specific Ph.D. department requirements determined with assistance from the trainees' faculty advisor. Also, departmental requirements often overlap & meet QuEST Electives; reference electives shown in listing here.

*Graduate College policy requires minimum of 9 credits each semester; roadmap based on the minimum/semester



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