

## Graduate Degree Plan PhD in Immunology & Microbiology



Students Starting Academic Year: 2020-2021

## General Degree Requirements:

- Completion of at least 180 term hours
- At least 30 of those term hours must be in Didactic courses
- Completion of at least three terms of Research Rotation
- Students must maintain satisfactory academic progress as detailed in the Student Handbook

		main satisfactory academic progress as deta	inea in the Stud	ent Handbook
Year Or	ne Requiren	nents:		
Term 1:	GS-GS-6600	Foundations A: Molecules to Systems	3 (Didactic) (two-term course)	
	GS-GS-6400	Foundations B: Biostatistics	2 (Didactic) (two-term course)	
	GS-GS-5101	Responsible Conduct of Research 1	1	1
	GS-GS-5111	Strategies for Success in Graduate School	1	1
	GS-IY-6401	Concepts in Host Immune System- Microbe Interactions	2 (Didactic) (two-term course)	
	GS-IY-5105	Seminars in Immunology & Microbiology	1	
	GS-IY-5110	Literature Review in I & M	1	
	GS-IY-5030	Research Rotation	1	Total to Date
		Total:	12 (7)	12 (7)
Term 2:	GS-GS-6600	Foundations A: Molecules to Systems	3 (Didactic) (two-term course)	
	GS-GS-6400	Foundations B: Biostatistics	2 (Didactic) (two-term course)	
	GS-GS-5112	Powerful Presentations	1	
	GS-IY-6401	Concepts in Host Immune System- Microbe Interactions	2 (Didactic) (two-term course)	
	GS-IY-5100	Student Research Seminar	1	
	GS-IY-5105	Seminars in Immunology & Microbiology	1	
	GS-IY-5110	Literature Review in I & M	1	
	GS-IY-5030	Research Rotation	1	Total to Date
		Total:	12 (7)	24 (14)
Term 3:	GS-IY-6302	Grand Challenges and Methods in Immunology & Microbiology	3 (Didactic)	
	GS-GS-5105	Scientific Writing	1	1
	GS-IY-5100	Student Research Seminar	1	1
	GS-IY-5105	Seminars in Immunology & Microbiology	1	1
	GS-IY-5110	Literature Review in I & M	1	1
	GS-IY-5030	Research Rotation ± Electives	5	Total to Date
		Total:		36 (17)
Term 4:	GS-IY-6303	Fundamentals of Effective Grant Writing	3 (Didactic)	
	GS-GS-5113	Effective Project Design & Management	1	1
	GS-IY-5100	Student Research Seminar	1	1
	GS-IY-5105	Seminars in Immunology & Microbiology	1	1
	GS-IY-5110	Literature Review in I & M	1	1
	GS-IY	Research Hours ± Electives	5	Total to Date
		Total:	12 (3)	48 (20)
Term 5	GS-IY	Research Hours ± Electives	12	Total to Date
		Total:		60 (20)

Year Tw	o Requiren	nents:			
Term 1:	GS-IY-5105		in Immunology & Microbiology	1	
	GS-IY-5110	Literature	Review in I & M	1	
	GS-IY	Research I	Hours ± Electives	10	Total to Date
			Total:	12	72 (20)
Term 2:	GS-IY-5100	Student Re	esearch Seminar	1	
	GS-IY-5105	Seminars i	in Immunology & Microbiology	1	
	GS-IY-5110	Literature	Review in I & M	1	
	GS-GS-510	2 Responsible	le Conduct of Research 2	1	
	GS-IY	Research I	Hours ± Electives	8	Total to Date
			Total:	12	854 (20)
Term 3:	GS-IY-5100	Student Re	esearch Seminar	1	
	GS-IY-5105	Seminars i	in Immunology & Microbiology	1	
	GS-IY-5110		Review in I & M	1	
	GS-IY				Tatal to Data
	GS-11	Research I	Hours ± Electives	9	Total to Date
C 1 1 77			Total:	12	96 (20)
			pointed by the end of Term 3 in the stude		ollment.
Term 4:	GS-IY-510		esearch Seminar	1	
	GS-IY-510	5 Seminars i	in Immunology & Microbiology	1	
	GS-IY-511	0 Literature	Review in I & M	1	
	GS-IY	Research I	Hours ± Electives	9	Total to Date
				12	108 (20)
			Total	112	
Torm 5:	GS-IV	Rosearch F	Total:		
Qualifying	GS-IY  Exam Requirest be taken by t	ement:	Hours ± Electives  Total:  Ten additional dia	12 12 12 lactic hours are required for	Total to Date 120 (20)
• Mus	Exam Require st be taken by t dent must comp	ement: he end of the se olete all prerequ	Hours ± Electives  Total:  Ten additional diagrams  cond year of enrollment usite activities defined by their pro-	12 12 lactic hours are required fo	Total to Date 120 (20) or a total of thirty (30)
Qualifying  • Mus • Stud	Exam Requirest be taken by the dent must complete equirement	ement: he end of the se lete all prerequ s beyond Ye	Hours ± Electives  Total:  Ten additional diagram  cond year of enrollment hisite activities defined by their pro-	12 lactic hours are required for the segment before taking to	Total to Date 120 (20) or a total of thirty (30) he exam
Qualifying  • Mus • Stud  Course R  Year Three	Exam Requirest be taken by to dent must compequirement equirement of the control	ement: he end of the se blete all prerequ s beyond Ye S-GS-5103	Total:  Ten additional dia  cond year of enrollment hisite activities defined by their processor.  Responsible Conduct of Research	12 12 dactic hours are required for segram before taking the earch 3	Total to Date 120 (20) or a total of thirty (30) he exam
Qualifying	Exam Requirest be taken by to dent must compequirements, Term 3: G	ement: he end of the se lete all prerequ s beyond Ye S-GS-5103 S-GS-5104	Total:  Ten additional dia  cond year of enrollment hisite activities defined by their pro- ear Two:  Responsible Conduct of Resear	12 12 dactic hours are required for segram before taking the earch 3	Total to Date 120 (20) or a total of thirty (30) he exam
Qualifying	Exam Requirest be taken by to dent must compequirements. Term 3: Great Term 3: Great Requirements.	ement: he end of the se blete all prerequ s beyond Ye S-GS-5103 S-GS-5104 ents until G	Total:  Ten additional dia  cond year of enrollment disite activities defined by their process  Responsible Conduct of Reserved Res	12 12 dactic hours are required for segram before taking the earch 3	Total to Date 120 (20) or a total of thirty (30) he exam
Qualifying	Exam Requirest be taken by to dent must complete equirements, Term 3: Grand Gr	ement: the end of the second Yes S-GS-5103 S-GS-5104 ents until G S-IY-5100	Total:  Ten additional dia  cond year of enrollment disite activities defined by their process  Responsible Conduct of Reseaution:  Student Research Seminar	12 12 lactic hours are required for signam before taking to the arch 3 arch 4	Total to Date
Qualifying	Exam Requirest be taken by to dent must compequirement e, Term 3: Grand	ement: he end of the se lete all prerequ s beyond Ye S-GS-5103 S-GS-5104 ents until G S-IY-5100 S-IY-5105	Total:  Ten additional dia  scond year of enrollment disite activities defined by their property.  Responsible Conduct of Research Responsible Conduct of Research Seminar Seminars in Immunology & N	12 12 lactic hours are required for signam before taking to the arch 3 arch 4	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 As required As required
Qualifying	Exam Requirest be taken by to dent must compequirements, Term 3: Grand G	ement: he end of the se lete all prerequ s beyond Ye S-GS-5103 S-GS-5104 ents until G S-IY-5100 S-IY-5105 S-IY-5050	Total:  Ten additional dia  cond year of enrollment disite activities defined by their property of the sear Two:  Responsible Conduct of Research Responsible Conduct of Research Seminar  Student Research Seminar  Seminars in Immunology & Management of the seminars of the seminar of the semi	12 12 dactic hours are required for sure taking to sure arch 3 arch 4 Microbiology	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 1 As required As required As required*
Qualifying	Exam Requirest be taken by to dent must complete equirements, Term 3: Grand Gr	ement: he end of the se lete all prerequ s beyond Ye S-GS-5103 S-GS-5104 ents until G S-IY-5100 S-IY-5105 S-IY-5050 ts shall enroll in the m	Total:  Ten additional dia  scond year of enrollment disite activities defined by their property.  Responsible Conduct of Research Responsible Conduct of Research Seminar Seminars in Immunology & N	12 12 dactic hours are required for sure taking to sure arch 3 arch 4 Microbiology	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 1 As required As required As required*
Qualifying	Exam Require st be taken by t dent must comp equirement e, Term 3: G Term 3: G G Requirement G G G *Studen	ement: the end of the second Yes beyond Yes S-GS-5103 S-GS-5104 ents until GS-IY-5100 S-IY-5105 S-IY-5050 ts shall enroll in the mrk:	Total:  Ten additional dia  scond year of enrollment usite activities defined by their pro- ear Two:  Responsible Conduct of Researeduation:  Student Research Seminar Seminars in Immunology & M Dissertation  umber of credits of Dissertation needed to be enroll	12 12 dactic hours are required for sure taking to sure arch 3 arch 4 Microbiology	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 1 As required As required As required*
Qualifying	Exam Requirest be taken by to dent must complete equirement as Term 3: Grand G	ement: he end of the se blete all prerequ s beyond Ye S-GS-5103 S-GS-5104 ents until G S-IY-5100 S-IY-5105 S-IY-5050 ts shall enroll in the m rk:	Total:  Ten additional dia  cond year of enrollment disite activities defined by their pro- car Two:  Responsible Conduct of Reseauth Responsible Conduct of Reseauth Research Seminar Student Research Seminar Seminars in Immunology & Manda Dissertation  Indianal Research Seminar Readings	12 12 dactic hours are required for sure taking to sure arch 3 arch 4 Microbiology	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 1 As required As required As required*
Qualifying	Exam Requirest be taken by to dent must complete de	ement: he end of the se lete all prerequ s beyond Ye S-GS-5103 S-GS-5104 ents until G S-IY-5100 S-IY-5105 S-IY-5050 ts shall enroll in the nor rk: 0	Total:  Ten additional dia  cond year of enrollment disite activities defined by their property of the propert	12 12 dactic hours are required for sure taking to sure arch 3 arch 4 Microbiology	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 1 As required As required As required*
Qualifying	Exam Requirest be taken by to dent must complete de	ement: the end of the second Years s beyond Years S-GS-5103 S-GS-5104 ents until G S-IY-5100 S-IY-5105 S-IY-5050 ts shall enroll in the mork: 0 0 0	Total:  Ten additional dia  cond year of enrollment disite activities defined by their pro- ear Two:  Responsible Conduct of Research Responsible Conduct of Research Responsible Conduct of Research Responsible Conduct of Research Traduation:  Student Research Seminar Seminars in Immunology & Manual Dissertation  Internation of Credits of Dissertation needed to be enrolled  Readings Research Rotation Special Projects	12 12 dactic hours are required for sure taking to sure arch 3 arch 4 Microbiology	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 1 As required As required As required*
Qualifying	Exam Require st be taken by t dent must comp equirement e, Term 3: G G Requirement G G G *Studen G GS-IY-501 GS-IY-503 GS-IY-504 GS-IY-505	ement: he end of the se blete all prerequ s beyond Ye S-GS-5103 S-GS-5104 ents until G S-IY-5100 S-IY-5105 S-IY-5050 ts shall enroll in the m rk: 0 0 0 0	Total:  Ten additional dia  scond year of enrollment hisite activities defined by their pro- ear Two:  Responsible Conduct of Researed Research Seminar  Student Research Seminar Seminars in Immunology & Manda Dissertation  Meadings Research Rotation Special Projects Dissertation	12 12 dactic hours are required for sure taking to sure arch 3 arch 4 Microbiology	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 1 As required As required As required*
Qualifying	Exam Require st be taken by t dent must comp equirement e, Term 3: G G Requirement G G G *Studen G GS-IY-501 GS-IY-503 GS-IY-504 GS-IY-505	ement: he end of the se lete all prerequ s beyond Ye S-GS-5103 S-GS-5104 ents until G S-IY-5100 S-IY-5105 S-IY-5050 ts shall enroll in the m rk: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total:  Ten additional dia  cond year of enrollment disite activities defined by their property of the propert	12 12 dactic hours are required for sure taking to sure arch 3 arch 4 Microbiology	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 1 As required As required As required*
Qualifying	Exam Requirest be taken by to dent must complete de	ement: the end of the second Years s beyond Years S-GS-5103 S-GS-5104 ents until G S-IY-5100 S-IY-5105 S-IY-5050 ts shall enroll in the more rk: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total:  Ten additional dia  scond year of enrollment hisite activities defined by their pro- ear Two:  Responsible Conduct of Researed Research Seminar  Student Research Seminar Seminars in Immunology & Manda Dissertation  Meadings Research Rotation Special Projects Dissertation	12 12 dactic hours are required for sure taking to sure arch 3 arch 4 Microbiology	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 1  As required As required As required*
Qualifying	Exam Requirest be taken by to dent must complete de	ement: the end of the second Yes s beyond Yes S-GS-5103 S-GS-5104 ents until G S-IY-5100 S-IY-5105 S-IY-5050 to shall enroll in the mork: 0 0 0 0 0 0 0 0 0 0 0 0 0 1 2	Total:  Ten additional dia  cond year of enrollment disite activities defined by their property of the	12 lactic hours are required for some before taking to the arch 3 larch 4  Microbiology  Microbiology	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 1 As required As required As required*
Qualifying	Exam Require st be taken by t dent must comp equirement e, Term 3: G G Requirement G G G *Student GS-IY-501 GS-IY-503 GS-IY-504 GS-IY-505 al Immunole GS-IY-620 GS-IY-620	ement: he end of the se blete all prerequ s beyond Ye S-GS-5103 S-GS-5104 ents until G S-IY-5105 S-IY-5050 ts shall enroll in the m rk: 0 0 0 0 0 0 0 0 0 0 0 0 1 2 3	Total:  Ten additional dia  cond year of enrollment disite activities defined by their pro- car Two:  Responsible Conduct of Reseave Research Seminar  Student Research Seminar  Seminars in Immunology & Manda Dissertation  Amber of credits of Dissertation needed to be enroll  Readings Research Rotation Special Projects Dissertation  Abiology courses*:  Cells, Tissues & Organs The Microbiome	12 lactic hours are required for some before taking to the arch 3 larch 4  Microbiology  Microbiology	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 1 As required As required As required*
Qualifying	Exam Requirest be taken by to dent must complete de	ement: the end of the second Yes s beyond Yes S-GS-5103 S-GS-5104 ents until G S-IY-5100 S-IY-5105 S-IY-5050 to shall enroll in the more rk: 0 0 0 0 0 0 0 0 0 1 2 3 1 4	Total:  Ten additional dia  cond year of enrollment disite activities defined by their pro- car Two:  Responsible Conduct of Reseauth Responsible Conduct of Reseauth Research Seminar  Student Research Seminar  Seminars in Immunology & Manda Dissertation  Imper of credits of Dissertation needed to be enrolled  Readings Research Rotation Special Projects Dissertation  Cells, Tissues & Organs The Microbiome Mechanisms of Autoimmunit	12 12 lactic hours are required for sure of the sure o	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 1 As required As required As required*
Qualifying	Exam Requirest be taken by to dent must complete de	ement: the end of the second Yes s beyond Yes S-GS-5103 S-GS-5104 ents until G S-IY-5100 S-IY-5105 S-IY-5050 to shall enroll in the more rk: 0 0 0 0 0 0 0 0 0 1 2 3 1 4	Total:  Ten additional dia  cond year of enrollment disite activities defined by their pro- ear Two:  Responsible Conduct of Research Responsible Conduct of Research Seminar  Student Research Seminar  Seminars in Immunology & Mander of credits of Dissertation needed to be enrolled  Readings Research Rotation Special Projects Dissertation  biology courses*:  Cells, Tissues & Organs The Microbiome Mechanisms of Autoimmunit Immunology	12 12 lactic hours are required for some param before taking to the arch 3 larch 4  Microbiology  ed full-time (12 credits) each to the arch to the ar	Total to Date 120 (20) or a total of thirty (30) he exam  1 1 As required As required As required* erm through Graduation.