

## Systems and Translational Biology Track

### FALL YEAR 1

<u>Course #</u>	<u>Course Name</u>	<u>Credit Hours</u>	<u>Graded Hours</u>
MSCI 601	Principles of Basic Medical Sciences I	5	5
SBTM 601	Experimental Techniques in Molecular, Cell, and Systems Biology I	4	4
MSCI 687	Professionalism and Ethics	1	1
	Lab Rotation I & II		
	Semester Hours	10	10
	Cumulative Hours	10	10

### SPRING YEAR 1

<u>Course #</u>	<u>Course Name</u>	<u>Credit Hours</u>	<u>Graded Hours</u>
SBTM 612	Experimental Techniques in Molecular, Cell, and Systems Biology II	4	4
SBTM 613	Human Organ Systems I	5	5
	Lab Rotation III & IV		
	Semester Hours	9	9
	Cumulative Hours	19	19

### SUMMER YEAR 1

<u>Course #</u>	<u>Course Name</u>	<u>Credit Hours</u>	<u>Graded Hours</u>
MSCI 681	Seminar	1	0
MSCI 691	Research	5	0
	Semester Hours	6	0
	Cumulative Hours	25	19

### FALL YEAR 2

<u>Course #</u>	<u>Course Name</u>	<u>Credit Hours</u>	<u>Graded Hours</u>
SBTM 614	Human Organ Systems II	5	5
SBTM 624	Computational Systems Biology: Biostatistics	2	2
SBTM 625	Computational Systems Biology: Bioinformatics and Imaging	2	2
	Semester Hours	9	9
	Cumulative Hours	34	28

**SPRING YEAR 2**

<u>Course #</u>	<u>Course Name</u>	<u>Credit Hours</u>	<u>Graded Hours</u>
MSCI 610 (Module 1)	Pathogenesis of Human Disease, Module 1	1	1
SBTM 615	Pathobiology and Therapeutics	3	3
	Elective	3-4	3-4
MSCI 691	Research	1-2	0
	Semester Hours	9	7-8
	Cumulative Hours	43	35-36

**SUMMER YEAR 2**

<u>Course #</u>	<u>Course Name</u>	<u>Credit Hours</u>	<u>Graded Hours</u>
MSCI 681	Seminar	1	0
MSCI 691	Research	5	0
	Semester Hours	6	0
	Cumulative Hours	49	35-36

**FALL YEAR 3**

<u>Course #</u>	<u>Course Name</u>	<u>Credit Hours</u>	<u>Graded Hours</u>
MSCI 691	Research	9	0
	Semester Hours	9	0
	Cumulative Hours	58	35-36

**SPRING YEAR 3**

<u>Course #</u>	<u>Course Name</u>	<u>Credit Hours</u>	<u>Graded Hours</u>
MSCI 691	Research	9	0
	Semester Hours	9	0
	Cumulative Hours	67	35-36

**SUMMER YEAR 3**

<u>Course #</u>	<u>Course Name</u>	<u>Credit Hours</u>	<u>Graded Hours</u>
MSCI 681	Seminar	1	0
MSCI 691	Research	5	0
	Semester Hours	6	0
	Cumulative Hours	73	35-36

**FALL YEAR 4**

<u>Course #</u>	<u>Course Name</u>	<u>Credit Hours</u>	<u>Graded Hours</u>
MSCI 691	Research	9	0
	Semester Hours	9	0
	Cumulative Hours	82	35-36

**SPRING YEAR 4**

<u>Course #</u>	<u>Course Name</u>	<u>Credit Hours</u>	<u>Graded Hours</u>
MSCI 691	Research	9	0
	Semester Hours	9	0
	Cumulative Hours	91	35-36

**SUMMER YEAR 4**

<u>Course #</u>	<u>Course Name</u>	<u>Credit Hours</u>	<u>Graded Hours</u>
MSCI 691	Research	5	0
MSCI 681	Seminar	1	0
	Semester Hours	6	0
	Cumulative Hours	97	35-36

**ELECTIVES**

<u>Course #</u>	<u>Course Name</u>	<u>Credit/Graded Hours</u>
ANSC / VTPP 654	Molecular Endocrinology	3
BICH 603	General Biochemistry	3
BICH 672	Biological Membranes	1
BICH 624	Enzymes, Proteins, and Nucleic Acids	3
BICH 625	Nucleic Acid-Protein Interactions	1
BICH 628	Computational Biology	3
BICH 631	Biochemical Genetics	3
BICH/BIOL 650	Genomics	3
BIOL 601	Biological Clocks	3
BIOL 611	Molecular Biology of Differentiation/Development	3
BIOL 644	Neural Development	3
BIOL 651	Bioinformatics	3
BIOL 670	The Cell Cycle	1
BIOL 674	Cellular & Molecular Aspects of Development	3
MCMD 625	Nucleic Acid / Protein Interactions	1
MCMD 671	Macromolecular Folding / Design	3
MMPA 601	Microbial Pathogenesis	3
MSCI 612	Current Topics in Cell Signaling	3
VAPH 640	Neurobiology	1-5
VTMI 601	Fundamentals of Pathobiology	5
VTMI 649	Immunology	3