

2020-21 BISC Major requirements for a minimum 33 credits in the major						NRSC minor 18 cr. - max. 6 cr. overlap w/BISC major	MCC Content Fulfilled
All major courses must be completed with a C- or better and with major gpa of at least 2.0							
Required 15-15 cr.	Cr.	Offered	Prerequisites				
Anatomy/Systems 9 credits	BISC 3135	Clinical Human Anatomy	4	Fall	BIOL 1002		
	BISC 3070 OR	Biochemistry for Health Professionals	3	Spring	BISC 2050, 2060 or CHEM 2111/2113		
	BISC 3213	Biochemistry (Requ. for MU PA, Recom. For pre-med)	4	Fa/Sp/Su	CHEM 2112 (can be conc.)		
	BISC 4145	Human Physiology	4	Fa/Sp/Su	BISC 3135 and biochemistry course		
Cell/Molecular 6 credits	BISC 3110	Nutritional Aspects of Health	3	Fall	BISC major and a course in biochemistry		BNJ-NSM
	BISC 3112	Head & Neck Anat. (or BISC 4113 Anat. Follows)	3	Fall	BISC 3135 and BISC major or consent of instructor		
	BISC 3850	Systems Neuroscience	3	Fall	BIOL 1001		2 of 4 CMI-NSM
	BISC 4140	Functional Neuroanatomy	3	Spring	BISC 3135 or BISC 7130		2 of 4 CMI-NSM
	BISC 4173	Principles of Human Embryology	3	Spring	BIOL 1002 and BISC 3135		
	BISC 4325	Endocrinology	3	Spring	BIOL 1002; and BISC 4145 or BIOL 3701		x CMI-NSM
	BISC 4514	Human Microanatomy (or BISC 7514 for PRDS)	4	Fall	BISC 1001 and BISC 3135		
	BISC 7330	Human Gross Anatomy	5	DP/PA/PAI	admitted to DPT or MPA programs		
	BISC 7515	Biomedical Systems 1	3	D1	Pre-Dental Scholars (PRDS)		
	BISC 9393	Signifies transfer credits for this content area	Var.	N/A	N/A		
Dig/Pathology 6 credits	BISC 3115	Human Microbiology (or BISC 7410 for PRDS)	3	Fall	BIOL 1002 and Biochemistry (can be concurrent)		
	BISC 4020	Molecular Neuroscience	3	Spring	BIOL 1001 and Soph Standing		2 of 4
	BISC 4160	Molecular Pathology	3	Fall	Biochemistry (can be concurrent)		
	BISC 4210	Biology of Aging	3	Fall	BISC 4145		x
	BISC 4340	Human and Applied Medical Genetics	3	Fa/Sp	Biochemistry		
	BISC 8001	Neuroscience Foundations 1	3	Admitted ADP	Admitted ADP for the Neuroscience PhD program		
	BISC 9392	Signifies transfer credits for this content area	Var.	N/A	N/A		
	BIOL 3201	Genetics	3	Spring	BIOL 1001/1002		
	BIOL 3301	Cell Biology	3	Fall	BIOL 1001/1002		
	BIOL 4501	Cellular Neurobiology	3	Spring	BIOL 1002		2 of 4 CMI-NSM
BISC electives (also includes content courses once content area complete)	BISC 4005	Immunobiology	3	Spring	BIOL 1001/1002		
	BISC 4150	General Pathology	3	Spring	BISC 3135 and BISC 4145 (can be concurrent); or BISC 2015		
	BISC 4120	Pharmacology (or BISC 7220 for PA)	3	Spring	Biochemistry and BISC 4145		
	BISC 4150	Outbreaks, Epidemics and Pandemics	3	Spring	BISC 3115 or BIOL 4801		CB-NSM
	BISC 4155	Diseases of the Brain	3	Fall	BISC 3135 & BISC 4145		x CMI-NSM
	BISC 4160	Molecular Pathology	3	Fall	Biochemistry (can be concurrent)		
	BISC 4275	Modern Plagues: Stress, Trauma and Addiction	3	Inactive			
	BISC 9393	Signifies transfer credits for this content area	Var.	N/A	N/A		
	PHTH 7515	Pathology/Pathophysiology	4	DP1	admitted to DPT program		
	BISC 1001	Contemporary Issues in Biomedical Sciences	1	Fall	Mandatory for all new freshman in BISC major		
BISC 1030	Introduction to Dentistry	1	Spring	Pre-dental Scholars; Consent required			
BISC 3136	Gross Anatomy for the Biomedical Sciences	3	Spring	BISC 3135 and consent of instr.			
BISC 3859	Evolution	3	Inactive	BIOL 1001 & BIOL 1002, a biochemistry course, & cons. of instr.			
BISC 4210	Neuroanatomy	3	Spring	BISC 3850, BISC 4140 or PSYC 3601		x	
BISC 4113	Anatomy Teaching Practicum	3	Fall	BISC Major and BISC 9002 prior summer, consent			
BISC 4142	Science and Society	1	Inactive	BISC Major and jr. standing			
BISC 4146/H	Physiology in Depth: Contemp. Issues	1	Fall	BISC 4145			
BISC 4147	Human Physiology Lab	1	Spring	BISC 4145 (can be conc.)			
BISC 4153/H	Advanced Pathology	1	Spring	BISC 3150 (can be concurrent)			
BISC 4153	Epidemiology	3	Spring	BISC major or CLS 2060 or HEAL 1025		IC-NSM	
BISC 4157	Global Health	3	Fall	Jr. Standing; and CLS 2060 or BISC 4153		CB-NSM	
BISC 4159	Public Health Program Planning, Implementation & Evaluation	3	Fall	CLS 2060 or BISC 4153 or enrolled in the PBHE minor			
BISC 4165	Microbiology Lab	1	Spring	BISC 3115 and consent of instructor			
BISC 4170	Biology, Moral Behavior and Policy	3	Spring	BISC 3135		x IC-NSM	
BISC 4214/H	Advanced Biochemistry	1	Fall	BISC 3213			
BISC 4241/H	Advanced Cellular Genetics and Cancer	1	Fall	BISC 4240			
BISC 4450	Practical Cases in Medicine	3	Fall	BISC 4145 and consent of instructor		BNJ-NSM	
BISC 4851/H	Advanced Systems Neuroscience	1	Spring	BISC 3850			
BISC 4931	Topics in Biomedical Sciences	var.	Occas.	Varies by Topic			
BISC 4953	Readings in Anatomy	1	Occas.	BISC 3136			
BISC 4986*	Internship in BISC	1-3	Fa/Sp/Su	Approval of Internship Director			
BISC 4987**	Internship in BISC - Grading	1-3	Fall	Must be paired w/BISC 3987 in prior summer			
BISC 4988*	Research Internship in BISC	1-3	Fa/Sp/Su	Approval of Internship Director			
BISC 4989*	Research Internship in BISC-Grading	1-3	Fall	Must be paired w/BISC 3989 in prior summer			
BISC 4993H*	Honors Community Engagement in BISC	1-3	Fa/Sp/Su	Limited to Students in the Honors Program			
BISC 4995H*	Independent Study	1-3	Fa/Sp/Su	Consent of instructor		w/approval	
BISC 4997H	Capstone for Disciplinary Honors Program	1	Spring	Accepted to BISC Disciplinary Honors Program			
BISC 7380	Clinical Neuroanatomy	3	Spring	Admitted to PA program			
BISC 7514	Human Microanatomy 2	4	Spring	Pre-Dental Scholar (PRDS)			
BISC 7516	Biomedical Systems 2	4	D1	Pre-Dental Scholar (PRDS)			
BISC 8002	Neuroscience Foundations 2	3	Spring	BISC 8001 & ADP in Neuroscience PhD			
BIOL 4102	Experimental Molecular Biology	3	occas.	BIOL 1001			
BIOL 4202	Experimental Genetics	3	Spring	BIOL 2201 (can be concurrent) and consent			
BIOL 4302	Experimental Cell Biology	3	Fall	BIOL 2301 (can be concurrent)			
BIOL 4502	Experimental Neurobiology	3	Spring	BIOL 2501 (can be concurrent) and consent			
BIOL 4702	Experimental Physiology	3	Fall	BIOL 3701 (can be concurrent) and consent			
BIOL 4802	Experimental Microbiology	3	Fall	BIOL 1002/1002H and consent			
MLSC 2050	Forensic Science	3	Spring	None			
MLSC 2060	Public Health	3	Spring	None		BNJ-NSM	
PHTH 7120	Pharmacology in Physical Therapy	2	Spring	admitted to DPT program			

\* can be repeated for a maximum of 6 credits with only 3 credits counting toward BISC major.

#### Other Degree Requirements (Biomedical Sciences Cognates)

Science Cognates - complete all of the following						MCC Course
	Credits	Offered				
BIOL 1001	General Biology 1	3	Fa/SUM			
BIOL 1002	General Biology 2	3	SPR/SUM			
CHEM 1001	General Chemistry 1	4	Fa/SPR/SUM			
CHEM 1002	General Chemistry 2	4	Fa/SPR/SUM			
CHEM 2111	Organic Chemistry 1	4	Fa/SUM	For pre-med, dent, PA, other prof. programs		
or BISC 2050	Organic Chemistry for the Health Sciences	3	Fa only	For programs not requiring year of e-chem (i.e. PT)		
<b>Lab Cognate - complete one of the following</b>						
BIOL 2001	Princ. of Biological Investigation (for programs needing 8 cr. of BIO with lab)	4	Fa/SPR/SUM	BIOL 1002 (can be concurrent)		
CLS 2200	Concepts in Clinical Laboratory Medicine	3	Fall	CLS maj, BIOL 1001/1002 & CHEM 1001/1002		
PHAS 7270	Diagnostics Technology	3	PAI	admitted to PA		
<b>Health and Society Cognate (H&amp;S) - complete one of the following</b>						
BISC 4153	Epidemiology (BISC elective or H&S cognate, NOT both)	3	Spring	BISC major or CLS 2060 or HEAL 1025		
BISC 4157	Global Health (BISC elective or H&S cognate, NOT both)	3	Fall	Jr. standing and CLS 2060 or BISC 4153		
BISC 4170	Biology, Moral Behavior and Policy (BISC elective or H&S cognate, NOT both)	3	Spring	BISC 3135		
BISC 4275	Modern Plagues: Stress, Trauma & Addiction (BISC elective or H&S, NOT both)	3	Occas.	BISC 4145 and cons. of instr.		
BISC 4381	Politics of U.S. Health Care	3	Fall	Jr. Standing		
BISC 4461	Comparative Health Politics and Policy	3	Spring	Jr. Standing		
MLSC 2060	Public Health (applies as BISC elective or H&S cognate, but NOT both)	3	Spring	None		BNJ-NSM
CMST 4500	Health Communication	3	Spring	CMST 2100 or instructor consent		BNJ-SSC
COMM 4330	Health, Science and Environmental Communication	3	Spring	None		
ENGL 3222	Writing for Health and Medicine	3	Fall/Spring	ENGL 1001 or HOPR 1955H		DISCV/WRIT
ENGL 4761	Medicine and Literature	3	Fall/Spring	ENGL 1001 or HOPR 1955H		DISCV/WRIT
HEAL 1025	Culture and Health	3	every term	None		ESSV1
HEAL 1200	Women's Health	3	Fall/Spring	None		
HEAL 1400	Veteran Health and Culture	3	every term	None		
HEAL 2100	Primary Health Care Concepts	3	Fall/Spring	Sophomore standing		
PSYC 2101	Introduction to Life-Span Developmental Psychology for Nursing Students	3	Fall	PSYC 1001		
PSYC 3101	Developmental Psychology: Conception through Adolescence	3	Fall/Spr/Sum	PSYC 1001		
PSYC 3120	Developmental Psychology: Adulthood and Aging	3	Spr/Sum	PSYC 1001		
PSYC 3220	Human Sexuality	3	Fall/Spr	PSYC 1001		
PSYC 3420	Health Psychology	3	Spring	PSYC 2050 or PSYC 3601		ESSV2/IC-SSC
SOCI 3300	Sociology of the Life Course	3	Fall	SOCI 1001 recommended		
SOCI 3500	Culture, Health and Illness	3	Spring	SOCI 1001, ANTH 1001 or ANTH 2101 recom.		
SOCI 3520	Health Care System	3	Inactive	SOCI 1001 recommended		
SOCI 3550	Race, Gender and Medicine	3	Fall	SOCI 1001, ANTH 1001 or ANTH 2101 recom.		
SOCI 3570	Men, Masculinities and Health	3	Fall	SOCI 1001 recommended		
SOCI 4300	Sociology of Aging	3	Spring	SOCI 1001 recommended		
SOWJ 1001	Introduction to Social Welfare and Justice	3	every term	None		ESSV1
SOWJ 2200	Human Behavior in the Social Environment	3	Fall/Spring	None		
SOWJ 4700	Global Aid and Humanitarianism	3	Spring	None		ESSV2
SPAN 4715	Advanced Spanish for the Health Professions	3	every term	SPAN 3710 or SPAN 3005		
BISC 4930	Special Topics (approved based on topic)	3	variable	BISC dept. approval based on topic		
BISC 4931	Topics in (approved based on topic)	3	variable	BISC dept. approval based on topic		
PHAS 7118	Clinical Decision Making	3	Summer PA2	admitted to the PA program		
<b>Statistics Cognate - complete one of the following</b>						
MATH 1700	Modern Elementary Statistics	3	Fa/Sp/Sum			CMI-NSM CB-NSM
MATH 4720	Statistics Methods	3	Fa/Sp/Sum			EH-NSM
MATH 4740	Biostatistics Methods and Models (recommended for MCAT prep)	3	Fall			
PSYC 2001	Psychological Measurements and Statistics (4 credits)	4	Fall/Spr/Sum			
SOCI 2060	Social Statistics	3	Fall/Spr/Sum			
<b>Medical Ethics Cognate - complete one of the following</b>						
HEAL 3200	Bioethics for Health Prof. (Can fulfill BISC H&S or Medical Ethics cognate, NOT both)	3	Fall/Spr	NIRES or HESIC major		
PHIL 4235	Biomedical Ethics (3 credits)	3	Fall/Spr	PHIL 2310 and soph. standing		BNJ-HUM
PHIL 4336	Applied Ethics for the Health Sciences (1 credit)	1	Fall/Spr	PHIL 2310 and jr. standing		
THEO 4450	Medical Ethics (3 credits)	3	Spring	THEO 1001 and jr. standing		EH-HUM