

2022-23 BISC Major requirements for a minimum 33 credits in the major with C- or higher

BISC Required Courses: three courses, 11-12 credits depending on the biochemistry option taken								
Required	BISC 3135	Clinical Human Anatomy	4	Fall	BIOL 1002			
	BISC 2070 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 2111			
	BISC 4145	Human Physiology	4	Fa/Sp/Su	BISC 3135 and biochemistry course			
BISC Content Areas: Five Courses (minimum 15 credits) including at least two courses from Anatomy and Systems (BISC AS) and two courses from Cellular and Molecular (BISC CM). At least one course designated as Disease and Pathology cognate [^] must be taken.						NRSC minor - max 6 cr. also for BISC	DSCV Content Fulfilled	
BISC AS (Anat./Systems)	BISC 3110	Nutritional Aspects of Health	3	Fall	Jr. stndg. and a course in biochemistry		BNJ	
	BISC 3112/4113	Head & Neck Anat. (BISC 4113 Anatomy Fellows only)	3	Fall	BISC 3135 and BISC major			
	BISC 3150 [^]	General Pathology	3	Spring	BISC 3135 & BISC 4145 (can be conc.)			
	BISC 3850	Systems Neuroscience	3	Fall	BIOL 1001	2 of 4	COG	
	BISC 4010	Neuroeconomics: The Neurosc. of Decision Making	3	Spring	BISC 3850, BISC 4140 or PSYC 3601	x	COG	
	BISC 4120 [^] /7220 [^]	Pharmacology (BISC 7220 for PA)	3	Spring	Biochemistry and BISC 4145		ExH	
	BISC 4140/5140	Functional Neuroanatomy	3	Fall	BISC 3135 or BISC 7130	2 of 4	COG	
	BISC 4155/5155	Diseases of the Brain	3	Fall	BISC 3135 & BISC 4145	x	COG	
	BISC 4173/5173	Principles of Human Embryology	3	Spring	BIOL 1002, BISC 3135 and Jr Stndg			
	BISC 4325/5325	Endocrinology (or BISC 5325)	3	Spring	BISC 4145 or BIOL 4701	x	COG/WRIT	
	BISC 4514/7514	Human Microanatomy (BISC 7514 for PRDS)	4	Fall	BISC 1001 and BISC 3135			
	BISC 7130	Human Gross Anatomy	5	Fall	admitted to DPT or OTD program			
	BISC 7230	Medical Anatomy	6	Summer	admitted to MPA program			
	BISC 7515	Biomedical Systems 1	3	D1 Fa	Pre-Dental Scholars (PRDS)			
	BISC 8002	Neuroscience Foundations 2	4	Spring	admitted to Neuroscience PhD Program			
	EXPH 5192	Advanced Exercise Physiology (EXRS ADP only)	3	Fall	admitted to EXRS ADP program			
	OCTH 7150 [^]	Clinical and Health Conditions 1 (OTD only)	3	OTD Fa	admitted to OT program			
	PHTH 7515 [^]	Clinical Pathology and Pathophys (DPT only)	4	DPT Sp	admitted to PT program			
	BISC CM (Cell/Molecular)	BISC 3115/7410	Human Microbiology (BISC 7410 for PRDS)	3	Fall	BIOL 1002 and Biochemistry (can be concurrent)		
		BISC 4020	Molecular Neuroscience	3	Spring	BIOL 1001 and Soph Stndg	2 of 4	
BISC 4160 [^] /5160 [^]		Molecular Pathology	3	Fall	Biochemistry (can be concurrent)		ExH	
BISC 4210		Biology of Aging	3	Fall	BISC 4145	x	ExH	
BISC 4340/5340		Human and Applied Medical Genetics	3	Fall	Biochemistry		ExH	
BISC 4342		Epigenetics and Human Disease	3	Spring	Biochemistry, which can be concurrent			
BISC 8001		Neuroscience Foundations 1	4	Fall	admitted to Neuroscience PhD program			
BIOL 3201		Genetics	3	Spring	BIOL 1001		ExH	
BIOL 3301		Cell Biology	3	Fall	BIOL 1001			
BIOL 4501		Cellular Neurobiology	3	Spring	BIOL 1002	2 of 4	COG	
BIOL 4806	Immunobiology	3	Spring	None				
BISC Electives: Select additional courses from the content areas above or the list below to achieve the minimum 33 credits in the BISC major with C- or higher.								
BISC Electives (courses marked with * can be repeated a max of 6 cr., only 3 cr. towards BISC major)	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 2020	Medical Terminology	1	Fa Even; Spr	BISC 3135			
	BISC 3136	Gross Anatomy for the Biomedical Sciences	3	Spring	BISC 3135 and consent of instr.			
	BISC 3859	Evolution	3	Occas.	BIOL 1001/1002, biochem. & cons. of instr.		CB	
	BISC 4113	Anatomy Teaching Practicum	3	Fall	Consent only. Can't also earn credit for BISC 3112			
	BISC 4142/H	Science and Society	1	Occas.	BISC Major and jr. standing			
	BISC 4146/H	Physiology In Depth: Contemp. Issues	1	Spring	BISC 4145			
	BISC 4147	Human Physiology Lab	1	Spring	BISC 4145 (can be conc.)			
	BISC 4150	Outbreaks, Epidemics and Pandemics (or BISC 7150)	3	Spring	BISC 3115 and Sr Stndg		CB	
	BISC 4151/H	Advanced Pathology	1	Spring	BISC 3150 (can be concurrent)			
	BISC 4153	Epidemiology	3	Spring	BISC major & Jr Stndg; or PBHE minor & MLSC 2060		IndC	
	BISC 4165	Microbiology Lab	1	Spring	BISC 3115 and cons. of instr.			
	BISC 4170	Biology, Moral Behavior and Policy	3	Spring	BISC 3135	x	IndC	
	BISC 4214/H	Advanced Biochemistry	1	Fall	BISC 3213			
	BISC 4275	Modern Plagues: Stress, Trauma and Addiction	3	Occas.	BISC 4145 and cons. of instr.			
	BISC 4341/H	Advanced Cellular Genetics and Cancer	1	Fa/Spr Even	BISC 4340			
	BISC 4460	Practical Cases in Medicine	3	Fall	BISC 4145 and cons. of instr.		BNJ/ESSV2	
	BISC 4851/H	Advanced Systems Neuroscience	1	Spr Odd Yr	BISC 3850			
	BISC 4931	Topics in Biomedical Sciences	var.	Occas.	Varies by Topic			
	BISC 4953	Readings in Anatomy	1	Fall Odd Yr	BISC 3136 or 3112, which may be concurrent			
	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 4991H*	Honors Community Engagement in BISC	1-3	Fa/Sp/Su	BISC Disciplinary Honors Program			
	BISC 4995/H*	Independent Study	1-3	Fa/Sp/Su	Consent of instructor	w/approval		
	BISC 4997H	Capstone for Disciplinary Honors Program	1	Spring	BISC Disciplinary Honors Program			
	BISC 7516	Biomedical Systems 2	4	D1 Spr	Pre-Dental Scholar (PRDS)			
	BIOL 4102	Experimental Molecular Biology	3	occas.	BIOL 3101 or CHEM 4530 and BIOL 4532 or equiv.			
	BIOL 4202	Experimental Genetics	3	Spring	BIOL 3201 (can be concurrent) and consent			
	BIOL 4302	Experimental Cell Biology	3	Fall	BIOL 3301 and consent			
	BIOL 4502	Experimental Neurobiology	3	Spring	BIOL 4501 (can be concurrent) and consent			
	BIOL 4702	Experimental Physiology	3	Fall	BIOL 4701 (can be concurrent) and consent			
	BIOL 4802	Experimental Microbiology	3	Fall	BIOL 4801 and consent			
MLSC 2050	Forensic Science	3	Spring	None				
MLSC 2060	Public Health	3	Spring	None		BNJ		
MLSC 4124	Medical Bacteriology 1	4	Spring	Biochemistry and cons. of instr.				
MLSC 4127	Medical Microbiology 2	4	Spring	MLSC 4124 and cons. of instr.				
OCTH 7190	Neuroanatomy	3	OTD Sp	admitted to OT program				
PHAS 7260	Pediatric Medicine	3	PA Sp	admitted to PA program				
PHTH 7120	Pharmacology in Physical Therapy	2	DPT Sp	admitted to PT program				

Other Degree Requirements (Biomedical Sciences Cognates)

Science Cognates - complete all of the following				Credits	Offered	MCC Course
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		BNJ
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		1	FA only	For programs not requiring year of o-chem (i.e. PT)	
Lab Cognate - complete one of the following				Offered	Prerequisites	
BIOL 2001	Princ. of Biological Investigation (for programs needing 8 cr. of BIO with lab)			FA/SPR/SUM	BIOL 1002 (can be concurrent)	
BISC 4147	Human Physiology Lab (applies as BISC elective or Lab cognate, NOT both)			Spring		
BISC 4165	Microbiology Lab (applies as BISC elective or Lab cognate, NOT both)			Spring		
MLSC 2200	Concepts in Medical Laboratory Medicine			Fall	MLSC major, BIOL 1001/1002 & CHEM 1001/1002	
PHAS 7270	Diagnostics Technology			PA1	admitted to PA	
Health and Society Cognate (H&S) - complete one of the following				Offered		
BISC 4153	Epidemiology (BISC elective or H&S cognate, NOT both)			Spring	BISC major or MLSC 2060 or HEAL 1025	
BISC 4170	Biology, Moral Behavior and Policy (BISC elective or H&S cognate, NOT both)			Spring	BISC 3135	
BISC 4275	Modern Plagues: Stress, Trauma & Addiction (BISC elective or H&S, NOT both)			Occas.	BISC 4145 and cons. of instr.	
BISC 4381	Politics of U.S. Health Care			Fall	Jr. Standing	
BISC 4461	Comparative Health Politics and Policy			Spring	Jr. Standing	
MLSC 2060	Public Health (applies as BISC elective or H&S cognate, but NOT both)			Spring	None	BNJ-NSM
CMST 4500	Health Communication			Spring	CMST 2100 or instructor consent	BNJ-SSC
COMM 4330	Health, Science and Environmental Communication			Spring	None	
ENGL 3222	Writing for Health and Medicine				ENGL 1001 or HOPR 1955H	DSCV/WRIT
ENGL 4661	Medicine and Literature				ENGL 1001 or HOPR 1955H	DSCV/WRIT
HEAL 1025	Culture and Health			every term	None	ESSV1
HEAL 1200	Women's Health			Fall/Spring	None	
HEAL 1400	Veteran Health and Culture			every term	None	
HEAL 2100	Primary Health Care Concepts			Fall/Spring	Sophomore standing	
PSYC 2101	Introduction to Life-Span Developmental Psychology for Nursing Students			Fall	PSYC 1001	
PSYC 3101	Developmental Psychology: Conception through Adolescence			Fall/Spr/Sum	PSYC 1001	
PSYC 3120	Developmental Psychology: Adulthood and Aging			Spr/Sum	PSYC 1001	
PSYC 3220	Human Sexuality			Fall/Spr	PSYC 1001	
PSYC 3420	Health Psychology			Spring	PSYC 2050 or PSYC 3601	ESSV2/IC-SSC
SOCI 3300	Sociology of the Life Course			Fall	SOCI 1001 recommended	
SOCI 3500	Culture, Health and Illness			Spring	SOCI 1001, ANTH 1001 or ANTH 2101 recom.	
SOCI 3520	Health Care Systems			Inactive	SOCI 1001 recommended	
SOCI 3550	Race, Gender and Medicine			Fall	SOCI 1001, ANTH 1001 or ANTH 2101 recom.	
SOCI 3570	Men, Masculinities and Health			Fall	SOCI 1001 recommended	
SOCI 4300	Sociology of Aging			Spring	SOCI 1001 recommended	
SOWJ 1001	Introduction to Social Welfare and Justice			every term	None	ESSV1
SOWJ 2200	Human Behavior in the Social Environment			Fall/Spring	None	
SOWJ 4700	Global Aid and Humanitarianism			Spring	None	ESSV2
SPAN 4715	Advanced Spanish for the Health Professions			every term	SPAN 3710 or SPAN 3005	
BISC 4930	Special Topics (approved based on topic)			variable	BISC dept. approval based on topic	
BISC 4931	Topics In (approved based on topic)			variable	BISC dept. approval based on topic	
PHAS 7095	Public Health			Fall PA1	admitted to the PA program	
Statistics Cognate - complete one of the following				Offered		
MATH 1700	Modern Elementary Statistics			FA/Spr/Sum		NSM
MATH 4720	Statistics Methods			FA/Spr/Sum		EH-NSM
MATH 4740	Biostatistics Methods and Models (recommended for MCAT prep)			Fall		
PSYC 2001	Psychological Measurements and Statistics (4 credits)			Inactive		
SOCI 2060	Social Statistics			Fall/Spr/Sum		
Medical Ethics Cognate - complete one of the following				Offered		
HEAL 3200	Bioethics for Healthcare (Can fulfill BISC H&S or Medical Ethics cognate, NOT both)			Fall/Spr	NURS or HESC major	
PHIL 4335	Biomedical Ethics (3 credits)			Fall/Spr	PHIL 2310 and soph. standing	BNJ-HUM
PHIL 4336	Applied Ethics for the Health Sciences (1 credit)			Fall/Spr	PHIL 2310 and jr. standing	
THEO 4450	Medical Ethics (3 credits)			Spring	THEO 1001 and Jr. standing	EH-HUM
PHAS 7245	Professional and Ethical Issues (3 credits)			Spring PA2	admitted to the PA program	