

BISC MAJOR REQUIREMENTS 2018-19

REQUIRED COURSES: for 11-12 credits (all courses in major must be completed with grade of C or better)					
1. Human Clinical Anatomy	BISC 2135	Clinical Human Anatomy	4 cr.	Fall	BIOL 1002
2. One BIOCHEM course	BISC 2070 BISC 3213	Biochemistry for Health Prof. Biochemistry	3 cr. 4 cr.	Spring F/Spr/Sum	BISC 2050 or CHEM 2111 CHEM 2112 (can be conc.). Strongly recommended for pre-med/dent; required for MU PA
3. Human Physiology	BISC 4145	Human Physiology	4 cr.	F/Spr/Sum	BISC 2135 and biochemistry course

BISC Major required courses (above), content areas & electives to complete a minimum 33 credits in the major - all courses towards the BISC major must be completed with a C or better						NRSC minor 18 cr.*
				Offered	Prerequisites	
Anatomy/Systems 3 credits	BISC 3112	Head and Neck Anatomy	3	Fall	BISC 2135 and BISC major or consent of instructor	
	BISC 3850	Systems Neuroscience	3	Fall	BIOL 1001	2 of 3*
	BISC 4140	Functional Neuroanatomy	3	Spring	BISC 2135 or BISC 7130	2 of 3*
	BISC 4173	Principles of Human Embryology	3	Spring	BIOL 1002 and BISC 2135	
	BISC 4325	Endocrinology	3	Spring	BIOL 1002; and BISC 4145 or BIOL 3701	x
	BISC 4514	Human Microanatomy (or BISC 7514 for PRDS)	4	Fall	BISC 1001 and BISC 2135	
	BISC 7130	Human Gross Anatomy	5	DPT4/PA1	admitted to DPT or MPA programs	
	BISC 7515	Biomedical Systems 1	3	D1	Pre-Dental Scholars (PRDS)	
	BISC 9391	Signifies transfer credits that apply to this content area	Var.	N/A	N/A	
Cell/Molecular 6 credits	BISC 3115	Human Microbiology (or BISC 7410 for PA and PRDS)	3	Fall	BIOL 1002 and Biochemistry (can be concurrent)	
	BISC 4160	Molecular Pathology	3	Fall	Biochemistry (can be concurrent)	
	BISC 4340	Medical Genetics	3	Fa/Spr	BISC 3213 or BIOL 4101 (can be concurrent)	
	BISC 9392	Signifies transfer credits that apply to this content area	Var.	N/A	N/A	
	BIOL 2201	Genetics	3	Spring	BIOL 1001/1002	
	BIOL 2301	Cell Biology	3	Fall	BIOL 1001/1002	
	BIOL 3501	Neurobiology	3	Spring	BIOL 1002	2 of 3*
	BIOL 4806	Immunobiology	3	Spring	BIOL 1001/1002	
Dis/Pathology 6 credits	BISC 3150	General Pathology	3	Spring	BISC 2135 and BISC 4145; or BISC 1015 or 2015/2016	
	BISC 4120	Pharmacology (or BISC 7120 for PA)	3	Spring	Biochemistry & BISC 4145 (or BISC 1015 or 2015/2016)	
	BISC 4150	Outbreaks, Epidemics and Pandemics	3	Spring	BISC 3115 or BIOL 3801	
	BISC 4155	Diseases of the Brain	3	Fall	BISC 2135	x
	BISC 4160	Molecular Pathology	3	Fall	Biochemistry (can be concurrent)	
	BISC 4275	Modern Plagues: Addiction, Obesity and Stress	3	Inactive	BISC 4145 and instructor consent	x
	BISC 9393	Signifies transfer credits that apply to this content area	var.	N/A	N/A	
	PHTH 7515	Pathology/Pathophysiology	4	DPT4	admitted to DPT program	
BISC electives (also content courses once content area completed) BISC 4931 (Topics Courses at MU) and BISC 9390 (Tx Credit)	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 3110	Nutritional Aspects of Health	3	Fall	BISC major and a course in biochemistry	
	BISC 3136	Gross Anatomy for the Biomedical Sciences	2	Spring	BISC 2135 and consent of instructor	
	BISC 3859	Evolution	3	Spring	BIOL 1001/1002, biochemistry, & instructor consent	
	BISC 4142	Science and Society	1	Spring	BISC Major and jr. standing	
	BISC 4146	Physiology In Depth: Contemporary Issues (or BISC 4146H)	1	Fall	BISC 4145	
	BISC 4147	Human Physiology Lab	1	Spring	BISC 4145 (can be conc.) or BIOL 3801 w/consent	
	BISC 4151	Advanced Pathology (or BISC 4161H)	1	Spring	BISC 3150 (can be concurrent)	
	BISC 4153	Epidemiology	3	Spring	Jr. Standing	
	BISC 4165	Microbiology Lab	1	Spring	BISC 3115 and consent of instructor	
	BISC 4170	Biology, Moral Behavior and Policy	3	Spring	BISC 2135	x
	BISC 4210	Biology of Aging	3	Fall	BISC 4145	x
	BISC 4214	Advanced Biochemistry (or BISC 4214H)	1	Fall	BISC 3213 (can be concurrent)	
	BISC 4341	Advanced Cellular Genetics and Cancer (or BISC 4341H)	1	Spring	BISC 4340 (can be concurrent)	
	BISC 4460	Practical Cases in Medicine	3	Fall	BISC 4145 and consent of instructor	
	BISC 4851	Advanced Systems Neuroscience (or BISC 4851H)	1	Spring	BISC 3850 (can be concurrent)	
	BISC 4931	Topics in Biomedical Sciences	var.	Every Term	Varies by Topic	
	BISC 4953	Readings in Human Anatomy (or BISC 4953H)	1	Fall	BISC 3136	
	BISC 4986	Internship in Biomedical Sciences	1-3	Every Term	Approval of Internship Director	
	BISC 4987	Internship in Biomedical Sciences - Work Period	1-3	Fall	Must be paired with BISC 3987 in previous summer	
	BISC 4988	Research Internship in Biomedical Sciences	1-3	Every Term	Approval of Internship Director	
	BISC 4991H	Honors Community Engagement in BISC	1-3	Every Term	Limited to Students in the Honors Program	
	BISC 4995	Independent Study (or BISC 4995H)	1-3	Every Term	Maximum 3 credits towards BISC major	w/approval
	BISC 4997H	Capstone for Disciplinary Honors Program	1		Accepted to BISC Disciplinary Honors Program	
	BISC 7180	Clinical Neuroanatomy (only for students in the PA program)				
	BISC 7154	Human Microanatomy (only for Pre-Dental Scholars)				
	BISC 7516	Biomedical Systems 2	4	D1	Pre-Dental Scholar (PRDS)	
	BIOL 3202	Experimental Genetics	3	Spring	BIOL 2201 (can be concurrent) and consent	
	BIOL 3302	Experimental Cell Biology	3	Fall	BIOL 2301 (can be concurrent)	
	BIOL 3502	Experimental Neurobiology	3	Spring	BIOL 3501 (can be concurrent) and consent	
BIOL 3702	Experimental Physiology	3	Fall	BIOL 3701 (can be concurrent) and consent		
BIOL 4102	Experimental Molecular Biology	3	occas.	BIOL 1001		
CLLS 2050	Forensic Science	3	Spring	None		
CLLS 2060	Public Health	3	Spring	None		
CLLS 3160	Molecular Diagnostics	3	Fall	Biochemistry (can be concurrent)		

* NRSC Minor: Must complete at least two of the three required courses; only 6 credits can count towards both the BISC major and NRSC minor

Other Degree Requirements (Biomedical Sciences Cognates)

Science Cognates - complete all of the following		Offered	
BIOL 1001	General Biology 1	FA/SUM	3
BIOL 1002	General Biology 2	SPR/SUM	3
CHEM 1001	General Chemistry 1	FA/SPR/SUM	4
CHEM 1002	General Chemistry 2	FA/SPR/SUM	4
CHEM 2111	Organic Chemistry 1 (for pre-med, pre-dent, pre-PA and other health professional programs)	FA/SUM	4
or BISC 2050	Organic Chemistry for the Health Sciences (option for PT)	FA only	1

Lab Cognate - complete one of the following		Offered	
BIOL 2001	Principles of Biological Investigation (required for professional programs that need 8 cr. of BIO with lab)	F/Sp/occas. summer	BIOL 1001/1002 (can be concurrent)
CLLS 2200	Concepts in Clinical Laboratory Medicine	Fall	
CLLS 3160	Molecular Diagnostics: Laboratory Techniques	Fall	major and
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, but NOT both)	Spring	Jr. Standing
BISC 4170	Biology, Moral Behavior and Policy (BISC elective or H&S cognate, NOT both)	Spring	BISC 2135
BISC 4275	Modern Plagues: Addiction, Obesity and Stress (BISC elective or H&S cognate, NOT both)	Inactive	BISC 4145 and instructor consent
BISC 4381	Politics of U.S. Health Care	Fall	Jr. Standing
BISC 4461	Comparative Health Politics and Policy	Spring	Jr. Standing
CLLS 2060	Public Health (BISC elective or H&S cognate, but NOT both)	Spring	None
CMST 4500	Health Communication	Spring	CMST 2100 or instructor consent
COMM 4330	Health, Science and Environmental Communication	Spring	None
HEAL 1025	Culture and Health (can be H&S or UCCS DC, but NOT both)	every term	None
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 3420	Health Psychology	Spring	PSYC 2050 or PSYC 3601
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
SOWJ 2200	Human Behavior in the Social Environment	Fall/Spring	None
SOWJ 4700	Global Aid and Humanitarianism	Spring	None
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 (approved based on topic)	variable	BISC dept. approval based on topic
PHAS 7118	Clinical Decision-Making 3	Spring PA2	admission to the PA program

Statistics Cognate - complete one of the following		Offered	
MATH 1700	Modern Elementary Statistics	FA/SPR/SUM	
MATH 4720	Statistics Methods	FA/SPR/SUM	
MATH 4740	Biostatistics Methods and Models (recommended for MCAT prep)	FA	
PSYC 2001	Psychological Measurements and Statistics (4 credits)	FA/SPR/SUM	
SOCI 2060	Social Statistics	FA/SPR/SUM	

Medical Ethics Cognate - complete one of the following		Offered	
PHIL 4335	Biomedical Ethics (3 credits)	SPR	PHIL 2310 and soph. standing
PHIL 4336	Applied Ethics for the Health Sciences (1 credit)	FA/SPR	PHIL 2310 and jr. standing
THEO 4450	Medical Ethics (3 credits)	occas. SPR	THEO 1001 and Jr. standing
PHAS 7245	Professional and Ethical Issues (3 credits)	only for students admitted to the PA program	

Marquette Core Curriculum (MCC) courses:	
ESSV1	ANTH 1001, HEAL 1025, HIST 1601, HIST 1701, SOCI 1001 or SOWJ 1001