

WESTERN MICHIGAN UNIVERSITY**College of Education and Human Development****Exercise Science****Clinical/Pre-Professional Concentration 65-75 Hours****Human Performance Concentration 60-70 Hours****Strength and Conditioning Concentration 57-58 Hours****Grand Rapids Community College Transfer Guide****(No Minor Required; 122 Credit Hours Needed for Graduation)**

WES	PRE-REQUISITES	COURSES	TRAN/SUB/GRADE	CR HR
I. EXERCISE SCIENCE CORE COURSES REQUIRED FOR ALL THREE CONCENTRATIONS (Must be completed with a "C" Grade or better)				
		HPHE 1520 Foundations of Exercise Science	EXS 184	3
	BIOS 1120 or 1600 or 1610	BIOS 2110 Human Anatomy	BI 121	4
	BIOS 2110	BIOS 2400 Human Physiology	BI 122	4
	BIOS 2110	HPHE 2950 Kinesiology		3
	BIOS 2110; 2400	HPHE 2980 Into to Exercise Physiology		3
	HPHE 2950 and 2980; or 1540	HPHE 3960 Principles of Strength & Conditioning		3
	HPHE 2980 or 1540	HPHE 3970 Exercise & Sports Nutrition		3
	HPHE 2950; 2980; 3150 or STAT 3660	**HPHE 4440 Prof Development in Exercise Science		3
	HPHE 2950; 2980; 3960; 3970; HPHE 3150 or STAT 3660	*HPHE 4450 Exercise Testing & Prescription		3
	HPHE 2950; 3960	HPHE 4950 Biomechanics		3
Level II: Personal Wellness		HPHE 1110 – OR – HPHE 1701 Health & Personal Wellness (2 cr) AND PEGN course (1 cr)	BI 125 or EXS 189	2 or 3
		*HPHE 1810 First Aid & CPR – OR – *HPHE 3810 Healthcare Provider CPR	WE 156	2
Total Credits (36-37)				
II. CHOOSE EITHER THE CLINICAL/PRE-PROFESSIONAL, THE HUMAN PERFORMANCE, OR THE STRENGTH AND CONDITIONING CONCENTRATION (All courses must be completed with a "C" or better)				
<ul style="list-style-type: none"> The Clinical/Pre-Professional Concentration is ideal for students looking to go into healthcare fields such as medicine, physical therapy, physician assistant, occupational therapy, athletic training, chiropractic, and cardiac rehabilitation. The Human Performance Concentration is ideal for students who wish to continue their education in exercise science areas such as exercise physiology, biomechanics, and motor control as well as conduct related research. The Strength & Conditioning Concentration is ideal for students interested in becoming fitness professionals such as strength and conditioning specialists and personal trainers. 				
CLINICAL/PRE-PROFESSIONAL CONCENTRATION SPECIFIC COURSES (PXCJ)				
		BIOS 1600 Biological Form & Function		3
Level II: Scientific Lit. with lab	MATH 1110 w/ "C" or better placement	CHEM 1100/1110 General Chemistry & Lab	CHM 130/131	4
Level II: Scientific Lit. with lab	MATH 1110 w/ "C" or better placement	PHYS 1130/1140 General Physics & Lab	PH 125	5
Level II: Science and Technology		PSY 1000 General Psychology	PY 201	3
Level II: Science and Technology (STAT 3660 only)	HPHE 1520 (for HPHE 3150) or MATH 1100 w/ "C" or better or placement (for STAT 3660)	HPHE 3150 Measurements/Evaluation/Stats OR STAT 3660 Data Analysis for Biosciences	MA 215 for STAT 3660	3 or 4
		HPHE 3500 Modification of Health Behavior	EXS 202	2
	HPHE 2980	HPHE 5910 Clinical Exercise Physiology I		3
	HPHE 2980, 5910	HPHE 5915 Clinical Exercise Physiology II		3
Total Credits (26-27)				

STRENGTH & CONDITIONING CONCENTRATION SPECIFIC COURSES (PXSJ)

		BIOS 1120 Principles of Biology	BI 101	3
Level II: Scientific Lit. with lab	MATH 1100 w/ "C" or better or placement	PHYS 1070/1080 Elem Physics & Lab	PH 115	5
	HPHE 1520	HPHE 3150 Measurements/Evaluation/Stats		3
	HPHE 3960; can be taken concurrently with HPHE 3970	HPHE 4920 Athlete Testing and Evaluation		3
	HPHE 3960; 4920	HPHE 4975 Tactical Training and Conditioning		3
				Total Credits (17)

HUMAN PERFORMANCE CONCENTRATION SPECIFIC COURSES (PXHJ)

		BIOS 1600 Biological Form & Function		3
Level II: Scientific Lit. with lab	MATH 1110 w/ "C" or better or placement	CHEM 1100/1110 General Chemistry & Lab	CHM 130/131	4
Level II: Scientific Lit. with lab	MATH 1110 w/ "C" or better or placement	PHYS 1130/1140 General Physics & Lab	PH 125	5
	HPHE 1520	HPHE 3150 Measurements/Evaluation/Stats		3
Level II: Personal Wellness		HPHE 3600 Sport and Performance Psychology		3
	HPHE 2980	HPHE 4940 Advanced Exercise Physiology		3
				Total Credits (21)

**III. COMPLETE EITHER THE CLINICAL/PRE-PROFESSIONAL CAPSTONE, THE HUMAN PERFORMANCE CASTONE, OR THE STRENGTH AND CONDITIONING CAPSTONE
(All courses must be completed with a "C" or better)**

Clinical/Pre-Professional and Human Performance Capstone: Select One of the Three Options Below

	All Required HPHE Courses	Option 1. HPHE 4980 Internship in Exercise Science		3-6
	Junior or Senior Status	Option 2. HPHE 5000 Studies in HPHE [Research in Exercise Science]		3-6
	Admittance to Exercise Science Accelerated Graduate Degree Program (AGDP)	Option 3. Choose four AGDP courses from list below: <ul style="list-style-type: none"> • HPHE 6700 Exercise Metabolism • HPHE 6710 Cardiovascular and Environmental Exercise Physiology • HPHE 6730 Advanced Biomechanics • HPHE 6740 Neuromuscular Control • HPHE 6760 Exercise Science Seminar • HPHE 6720 Laboratory in Exercise Physiology • HPHE 6750 Laboratory Techniques in Biomechanics 		12
				Total Credits (18-24)

Strength and Conditioning Capstone: Complete Both Courses Below

	HPHE 3960; can be taken concurrently with HPHE 4920 & 3970	HPHE 4982 Strength and Conditioning Internship I		2
	HPHE 4982	HPHE 4983 Strength and Conditioning Internship II		2
				Total Credits (4)

*Take one semester before internship **Take two semesters before internship

Clinical/Pre-Professional Elective Suggestions

WES	PRE-REQUISITES	APPROVED COURSES	CR HR	Equivalent
	BIOS 1600	BIOS 1610 (1500) Molecular & Cellular Biology	4	BI 151
	BIOS 1600	BIOS 1620 (1510) Ecology & Evolution	4	BI 152
	CHEM 1120; BIOS 1610 (1500) and BIOS 1620 (1510)	BIOS 2300 Cell Biology	3	
	CHEM 1120; BIOS 1610 (1500) and BIOS 1620 (1510)	BIOS 2500 Genetics	3	BI 232
	BIOS 2500; CHEM 3750 and CHEM 3760	BIOS 3120 Microbiology	5	
	56+ hrs; BIOS 2500, CHEM 3750/3760 or 3700/3710	BIOS 3500 Human Physiology for Majors	5	
	CHEM 1100/1110	CHEM 1120/1130 Gen Chem II	4	CHM 140/141
	CHEM 3700/3710 or 3770/3780	CHEM 3550/3560 Biochemistry	4	

	CHEM 1120/1130	CHEM 3700/3710 – OR – 3750/3760 Organic Chemistry	4	CHM 240 or CHEM 230/231 for CHEM 3700/3710 – OR – CHM 260/261 for CHEM 3750/3760
	CHEM 3750/3760	CHEM 3770/3780 Organic Chemistry II	4	CHM 270/271
Lev II: PW (PS)		FCS 2660 Personal Nutrition (on-line and on campus)	3	
		HOL 5360 Counseling Skills for Health Professions	3	
Level I: ODC		HSV 2250 Growth, Development, and Aging	3	EDU 120
Level II: ST	45+ credit hours for NURS 3220 only	PHIL 3340 Biomedical Ethics – OR – NUR 3220 Health Care Ethics	4/3	PL 206
	PHYS 1130/1140	PHYS 1150/1160 Gen Physics II	5	PH 126
	PSY 1000	PSY 2500 Abnormal Psychology	3	PY 231
Level I: IE		SOC 2000 Principles of Sociology	3	SO 251
	SOC 2000	SOC 3730 Sociology of Health & Illness	3	
Level II: ST	MATH 1100 w/"C" or better or placement	STAT 3660 Data Analysis for Biosciences (If not taken as part of concentration)	4	MA 215

CLINICAL/PRE-PROFESSIONAL ELECTIVE SUGGESTIONS -
https://wmich.edu/sites/default/files/attachments/u1635/2022/Clinical_Pre-Professional%20Elective%20Suggestions.pdf

PROGRAM GUIDE—MEET WITH A CEHD ADVISOR TO DECLARE MAJOR
www.wmich.edu/education/advising