Catalog years

?022-present

!pdated: 6/23/2022

WESTERN MICHIGAN UNIVERSITY

College of Education and Human Development

Exercise Science

<u>Clinical/Pre-Professional Concentration</u> 65-75 Hours <u>Human Performance Concentration</u> 60-70 Hours Strength and Conditioning Concentration 57-58 Hours

Monroe County Community College Transfer Guide

(No Minor Required; 122 Credit Hours Needed for Graduation)

WES	PRE- REQUISITES	COURSES	TRAN/SUB/GRADE	CR HR			
I. EXERCISE SCIE	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		3			
	BIOS 1120 or 1600 or 1610	BIOS 2110 Human Anatomy	BIOL 202	4			
	BIOS 2110	BIOS 2400 Human Physiology	BIOL 258	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)	HPE 150	2 or 3			
		*HPHE 1810 First Aid & CPR OR *HPHE 3810 Healthcare Provider CPR	HPE 151	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)

- 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	BIOL 153	3
Level II: Scientific Lit. with lab	MATH 1110 w/ "C" or better	CHEM 1100/1110 General Chemistry & Lab	CHEM 151	4
Level II: Scientific Lit. with lab	MATH 1110 w/ "C" or better placement	PHYS 1130/1140 General Physics & Lab	PHY 151	5
Level II: Science and Technology		PSY 1000 General Psychology	PSCYCH 151	3
	3130)	HPHE 3150 Measurements/Evaluation/Stats OR STAT 3660 Data Analysis for Biosciences	MAT 162	3 or 4
		HPHE 3500 Modification of Health Behavior		2

HPHE 2980, 5910 HPHE 5915 Clinical Exercise Physiology II Total Credits (26 STRENGTH & CONDITIONING CONCENTRATION SPECIFIC COURSES (PXSJ) BIOS 1120 Principles of Biology BIOL 153 HPHE 1520 HPHE 1520 HPHE 3960; can be taken concurrently with HPHE 3960; 4920 HPHE 4975 Tactical Training and Conditioning Total Credits HUMAN PERFORMANCE CONCENTRATION SPECIFIC COURSES (PXHJ) BIOS 1600 Biological Form & Function BIOL 153 Level II: Scientific Lit. with lab MATH 1110 w/ *C* or better principles of the physics & Lab principles of the physics of the physics & Lab princip		HPHE 2980	HPHE 5910 Clinical Exercise Physiology I		3
STRENGTH & CONDITIONING CONCENTRATION SPECIFIC COURSES (PXS) BIOS 1120 Principles of Biology BIOL 153 BIOS 1500 Reasurements/Evaluation/Stats BIPHE 3960, can be taken BIOL 150 BIPHE 3960, 4920 BIPHE 3960 Administration BIOL 153 BIOS 1600 Biological Form & Function BIOL 153 BIOS 1600 Biological Form & Function BIOL 153 BIOS 1600 Biological Form & Function BIOL 153 CHEM 1100 WT Combine BIOL 153 BIOS 1600 Biological Form & Function BIOL 153 BIOS 1600 Biological Form & Function BIOL 153 BIOL 153 BIOS 1600 Biological Form & Function BIOL 153 BIOL 153 BIOL 153 BIOS 1600 Biological Form & Function BIOL 153 BIOL		HPHE 2980, 5910			3
STRENGTH & CONDITIONING CONCENTRATION SPECIFIC COURSES (PXSJ) MIOS 1120 Principles of Biology BIOL 153 MATH 1100 w^-C^- where		,	III IIE 3713 Chinical Exercise I hysiology II	Total Credit	
BIOS 1120 Principles of Biology BIOL 153 WATH 1100 w"C or before presented in placement IPHE 1520 IPHE 3150 Measurements/Evaluation/Stats IPHE 3906; can be taken concurrently with IPHEI 3150 Measurements/Evaluation/Stats IPHE 4920 Athlete Testing and Evaluation BIOL 153 IPHE 4920 Athlete Testing and Evaluation BIOL 153 IPHE 4920 Athlete Testing and Conditioning Total Credits HUMAN PERFORMANCE CONCENTRATION SPECIFIC COURSES (PXHJ) BIOS 1600 Biological Form & Function BIOL 153 CHEM 1100/1110 General Chemistry & Lab CHEM 1551 PHY 151 PHY 151 IPHE 3150 Measurements/Evaluation/Stats IPHE 320 IPHE 3500 Sport and Performance Psychology HPHE 2600 Sport and Performance Psychology IPHE 4940 Advanced Exercise Physiology IPHE 4940 Advanced Exercise Physiology IPHE 4940 Advanced Exercise Metabolism 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 Admittance to Exercise Science Accelerated Graduate Degree Program (AGDP) Admittance to Exercise Science Accelerated Graduate Degree Program (AGDP) IPHE 3600 Sundais in HPHE [Research in Exercise Science) Option 2. HPHE 5600 Sundais in HPHE [Research in Exercise Science] Option 3. Choose four AGDP courses from list below: IPHE 6740 Neuromass clarce Seminal HPHE 6740 Neuromass clarce Seminal HPHE 6740 Neuromass clarce Cesminal HPHE 6750 Laboratory in Exercise Seminal HPHE 6750 Laboratory Techniques in Biomechanies Total Credits (IB- Total Credits (IB- Strength and Conditioning Capstone: Complete Both Courses Below IPHE 6750 Laboratory Techniques in Biomechanies IPHE 4980 as a betaken concurrently with IPHEI [B] 4982 Strength and Conditioning Internship I		CTDENCTH & CONDU			.S (20-2
### ATH 110 #**C** or before Physics & Lab PHY 151 ### 1520 ### 1530 ### 1540 ### 1		STRENGTH & CONDIT		<u>′</u>	
IPHE 1520		MATII 1100 (400) 1 4			3
IPHE 3960, can be taken concurrently with HPHE 4920 Athlete Testing and Evaluation HPHE 3960, 4920 HPHE 4975 Tactical Training and Conditioning Total Credits HUMAN PERFORMANCE CONCENTRATION SPECIFIC COURSES (PXHJ) BIOS 1600 Biological Form & Function BIOL 153 Level II: Scientific Lit. with lab MATH 1110 w "C" or bester pelacement pelacement pelacement pelacement in the pelacement pelacement in the pe	Level II: Scientific Lit. with lab		PHYS 1070/1080 Elem Physics & Lab	PHY IST	5
Soncurrently with HPHE HPHE 4920 Athlete Testing and Evaluation 1970 19			HPHE 3150 Measurements/Evaluation/Stats		3
HUMAN PERFORMANCE CONCENTRATION SPECIFIC COURSES (PXHJ) BIOS 1600 Biological Form & Function BIOL 153 Level II: Scientific Lit, with lab MATH 1110 w'-C' or better by photocones in ph		concurrently with HPHE	HPHE 4920 Athlete Testing and Evaluation		3
HUMAN PERFORMANCE CONCENTRATION SPECIFIC COURSES (PXHJ) MATH 110 w C or better or pilecement or pilecemen		НРНЕ 3960; 4920	HPHE 4975 Tactical Training and Conditioning		3
BIOS 1600 Biological Form & Function BIOL 153 Level II: Scientific Lit. with lab AATH 1110 w/*C* or better prisements Level II: Scientific Lit. with lab MATH 1110 w/*C* or better PHYS 1130/1140 General Chemistry & Lab PHY 151 PHYS 1130/1140 General Physics & Lab PHY 151 P				Total Cr	edits (1
ANTH 1110 w''C' or better placement the placement the placement placement the pl		HUMAN PERFORM	ANCE CONCENTRATION SPECIFIC COURSES (PXHJ)		
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Level II: Scientific Lit. with lab	Level II: Scientific Lit. with lab		CHEM 1100/1110 General Chemistry & Lab	CHEM 151	4
HPHE 1520 HPHE 3150 Measurements/Evaluation/Stats HPHE 3600 Sport and Performance Psychology HPHE 2980 HPHE 4940 Advanced Exercise Physiology Total Credits (HPHE 2980 HPHE 4940 Advanced Exercise Physiology Total Credits (HPHE 2980 HPHE 4940 Advanced Exercise Physiology Total Credits (HPHE 3160 Sport and Performance Psychology Total Credits (HPHE 3160 Sport and Performance Psychology Total Credits (HPHE 3160 Exercise Physiology All Required HPHE Courses Junior or Senior Status Option 1. HPHE 4980 Internship in Exercise Science Option 2. HPHE 5000 Studies in HPHE [Research in Exercise Science] Option 3. Choose four AGDP courses from list below: HPHE 6700 Exercise Metabolism HPHE 6700 Exercise Metabolism HPHE 6700 Exercise Science Seminar HPHE 6740 Neuromuscular Control HPHE 6740 Neuromuscular Control HPHE 6740 Neuromuscular Control HPHE 6750 Laboratory in Exercise Physiology HPHE 6750 Laboratory Techniques in Biomechanics Total Credits (18- Strength and Conditioning Capstone: Complete Both Courses Below HPHE 4982 Strength and Conditioning Internship I HPHE 4982 Strength and Conditioning Internship I	Level II: Scientific Lit. with lab	MATH 1110 w/ "C" or better	PHYS 1130/1140 General Physics & Lab	PHY 151	5
HPHE 2980 HPHE 4940 Advanced Exercise Physiology Total Credits (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 Option 2. HPHE 5000 Studies in HPHE [Research in Exercise Science] Option 3. Choose four AGDP courses from list below: HPHE 6710 Cardiovascular and Environmental Exercise Physiology HPHE 6730 Advanced Biomechanics HPHE 6740 Neuromuscular Control HPHE 6740 Exercise Science Seminar HPHE 6750 Laboratory in Exercise Physiology HPHE 6750 Laboratory Techniques in Biomechanics Total Credits (18- Strength and Conditioning Capstone: Complete Both Courses Below HPHE 4982 Strength and Conditioning Internship I			HPHE 3150 Measurements/Evaluation/Stats		3
Total Credits (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 Junior or Senior Status Option 1. HPHE 4980 Internship in Exercise Science Option 2. HPHE 5000 Studies in HPHE [Research in Exercise Science] Option 3. Choose four AGDP courses from list below: HPHE 6700 Exercise Metabolism HPHE 6710 Cardiovascular and Environmental Exercise Physiology HPHE 6730 Advanced Biomechanics HPHE 6740 Neuromuscular Control HPHE 6750 Laboratory in Exercise Physiology HPHE 6750 Laboratory Techniques in Biomechanics Total Credits (18- Strength and Conditioning Capstone: Complete Both Courses Below HPHE 4982 Strength and Conditioning Internship I	Level II: Personal Wellness		HPHE 3600 Sport and Performance Psychology		3
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 Option 2. HPHE 5000 Studies in HPHE [Research in Exercise Science] Option 3. Choose four AGDP courses from list below: HPHE 6700 Exercise Metabolism HPHE 6710 Cardiovascular and Environmental Exercise Psysiology HPHE 6740 Neuromuscular Control HPHE 6740 Neuromuscular Control HPHE 6750 Laboratory in Exercise Physiology HPHE 6750 Laboratory Techniques in Biomechanics Total Credits (18- Strength and Conditioning Capstone: Complete Both Courses Below HPHE 3960; can be taken concurrently with HPHE 4982 Strength and Conditioning Internship I		НРНЕ 2980	HPHE 4940 Advanced Exercise Physiology		3
All Required HPHE Courses Junior or Senior Status Option 2. HPHE 5000 Studies in HPHE [Research in Exercise Science] Option 3. Choose four AGDP courses from list below: HPHE 6700 Exercise Metabolism HPHE 6710 Cardiovascular and Environmental Exercise Physiology HPHE 6730 Advanced Biomechanics HPHE 6740 Neuromuscular Control HPHE 6740 Neuromuscular Control HPHE 6750 Laboratory in Exercise Physiology HPHE 6750 Laboratory Techniques in Biomechanics Total Credits (18- 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		(All cour	rses must be completed with a "C" or better)		
Junior or Senior Status	Clinical/Pre-Profe		n Performance Capstone: Select One of the 11	iree Options Below	7
Science Science			Option 1. HPHE 4980 Internship in Exercise Science		3-6
Admittance to Exercise Science Accelerated Graduate Degree Program (AGDP) HPHE 6730 Advanced Biomechanics HPHE 6740 Neuromuscular Control HPHE 6750 Laboratory in Exercise Physiology HPHE 6750 Laboratory Techniques in Biomechanics Total Credits (18- Strength and Conditioning Capstone: Complete Both Courses Below HPHE 3960; can be taken concurrently with HPHE 4982 Strength and Conditioning Internship I HPHE 4982 Strength and Conditioning Internship I		Junior or Senior Status	Science]		3-6
Strength and Conditioning Capstone: Complete Both Courses Below HPHE 3960; can be taken concurrently with HPHE 4982 Strength and Conditioning Internship I 4920 & 3970 HPHE 4982 Strength and Conditioning Internship I		Science Accelerated Graduate Degree Program	 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 		12
HPHE 3960; can be taken concurrently with HPHE 4982 Strength and Conditioning Internship I 4920 & 3970					(18-24)
concurrently with HPHE 4982 Strength and Conditioning Internship I 4920 & 3970	S	trength and Condi	tioning Capstone: Complete Both Courses Bel	ow	
HPHE 4982 HPHE 4983 Strength and Conditioning Internship II					
The state of the s			HFRE 4962 Strength and Conditioning Internship I		2

^{*}Take one semester before internship **Take two semesters before internship

Clinical/Pre-Professional Elective Suggestions

			CR	
WES	PRE-REQUISITES	APPROVED COURSES	HR	Equivalent
	BIOS 1600	BIOS 1610 (1500) Molecular & Cellular Biology	4	BIOL 151
	BIOS 1600	BIOS 1620 (1510) Ecology & Evolution	4	
	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	BIOL 264
	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	CHEM 152

	CHEM 3700/3710 or 3770/3780	CHEM 3550/3560 Biochemistry	4	
	CHEM 1120/1130	CHEM 3700/3710 OR 3750/3760 Organic Chemistry	4	CHEM 251
	CHEM 3750/3760	CHEM 3770/3780 Organic Chemistry II	4	CHEM 252
Lev II: PW (PS)		FCS 2660 Personal Nutrition (on-line and on campus)	3	HLTSC 151
		HOL 5360 Counseling Skills for Health Professions	3	
Level I: ODC		HSV 2250 Growth, Development, and Aging	3	
Level II: ST		PHIL 3340 Biomedical Ethics		
	45+ hrs for NURS 3220 only	OR NUR 3220 Health Care Ethics	4/3	
	PHYS 1130/1140	PHYS 1150/1160 Gen Physics II	5	PHY 152
	PSY 1000	PSY 2500 Abnormal Psychology	3	HPE 153
Level I: IE		SOC 2000 Principles of Sociology	3	SOC 151
	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	MATH 162

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