



University at Buffalo

The State University of New York

**UNDERGRADUATE
PROGRAMS
IN EXERCISE SCIENCE**

2017-2018

The information in this brochure applies to students with a 2017-2018 catalog year



University at Buffalo

Exercise Science

School of Public Health and Health Professions

WHAT IS EXERCISE SCIENCE?

Exercise Science has a sound knowledge base in the scientific principles that underlie human movement. An exercise scientist has expertise in physiology, anatomy, biomechanics and nutrition as applied to human physical activity with the goal of maintaining or improving health, fitness or performance.

WHAT CAN YOU DO WITH AN ES DEGREE?

The B.S. in Exercise Science is excellent preparation for related graduate programs as well as professional courses of study in physical therapy, public health, medicine, chiropractic, or physician's assistant. Graduates are also well prepared for entry-level positions that focus on rehabilitation, prevention of injury and disease, health and wellness and/or performance enhancement.

ADMISSIONS IN EXERCISE SCIENCE

- First year students can be accepted to the Exercise Science major upon gaining admission to the University at Buffalo.
- Transfer students must apply online to the University at Buffalo at www.admissions.buffalo.edu.
- UB students may change to the Exercise Science major by submitting the Plan Change Form available at: https://ubsphhp.formstack.com/forms/ug_plan_change.

Being placed in the ES major does not guarantee admission to the professional sequence. All students in the ES major must complete prerequisite courses, submit the Promotion to Professional Sequence (PPS) application, and be accepted in order to continue with the upper division courses in Exercise Science.

PPS applications are due by Friday of the second week of the spring semester. Students should apply during the semester they plan to have all of their prerequisite coursework completed. Students missing prerequisites will not be considered for admission to the upper division program. Applications are available online at <http://sphhp.buffalo.edu/ens>.

To be eligible for the upper division students must have a minimum prerequisite GPA of 2.5 (3.0 for Pre-PT track). Students must also have all prerequisite courses completed by the end of the spring semester that the PPS application is submitted. **Admission to the professional sequence is competitive.** Students are ranked by prerequisite GPA and only the top 125-130 students are accepted.

TRACKS IN EXERCISE SCIENCE

General Exercise Science:

Students begin the program with a two-year prerequisite phase followed by a two-year upper level ES sequence.

Pre-Physical Therapy:

The first three years of the ES program provide students with the prerequisites for the DPT program. Students must have a prerequisite GPA of 3.0 or better and grades of C or better in all prerequisite courses to be eligible to apply for admission. In the first year of upper division in the ES program, students may submit an online application, recent GRE (Graduate Record Exam) scores, the volunteer experience form (40 hours), and two reference forms before the November 1st deadline. For more information about applying to the DPT program visit <http://sphhp.buffalo.edu/rs> or contact MaryAnn Venezia, Program Coordinator at venezia3@buffalo.edu.

BS in Exercise Science/MS in Nutrition:

The department offers a 5-year combined BS/MS program in Exercise Science & Nutrition. This dual degree program allows students to complete 2 degrees in 5 years. The program combines 2 areas at the forefront of chronic disease prevention and is well-suited to students wishing to go on to advanced professional degrees (i.e. medical, physician assistant, chiropractic programs) or further study at the PhD level. Once accepted and enrolled in the upper division of ES, students may submit an online graduate application by the first academic day in March during their first year in the upper division. Students with a GPA of 2.8 or better in their last 60 credits and grades of C or better in all prerequisite courses are eligible. To continue in the MS portion of the degree, students must have an overall GPA of 3.0 by the fall semester of their fourth year.

***Please note: The BS/MS program does not lead to registered dietician licensure or allow you to practice as an RD.**

BS in Exercise Science/MPH in Epidemiology:

The School of Public Health and Health Professions offers a 5-year combined program in Exercise Science & Epidemiology. Once accepted and enrolled in the upper division of ES, students may submit an online graduate application to apply to the MPH portion of the program. Acceptance criteria and procedures can be found at <http://sphhp.buffalo.edu/eeh>.

BS in Exercise Science/MS in Athletic Training:

The department offers a 5-year combined BS/MS program in Exercise Science & Athletic Training. This dual degree program is designed to provide an expedited path to master's level education while completing the requirements to become a certified athletic training (ATC®). Freshman can apply and be accepted directly into this program. To maintain good standing, students must maintain a GPA >2.75 and receive a grade of C or better in all required courses. Students must submit a graduate application in their 3rd year and maintain a GPA of 3.0 or higher in graduate courses.

ADVISEMENT

Students are encouraged to meet with their advisor regularly and to visit the ENS website for program and application information. Please make an appointment with an advisor in the Office for Academic and Student Affairs by calling 829-5000 or emailing sphhp-oasa@buffalo.edu.

All transfer students are encouraged to verify course equivalencies from other schools at the following website: <http://taurus.buffalo.edu/>. **Only articulated courses will be accepted on the Promotion to Professional Sequence Application.** Transfer students should email sphhp-oasa@buffalo.edu for advisement.

PREREQUISITE COURSES

The prerequisite courses provide a foundation in nutrition, psychology, chemistry, physics, mathematics, anatomy and human physiology to ensure your success in the program. The prerequisite requirements listed below are for the BS in ES, Pre-PT, BS/MS in ES and Nutrition, and the BS/MPH only. The first two years of coursework for the combined BS in ES and MS in Athletic Training are listed on page 9.

COURSE NAME	UB COURSE #	CREDITS
Human Form & Function or Comparative Primate Anatomy	ES 207 or APY 345-346	4-5 cr.
Physiology	PGY 300	4 cr.
Chemistry I and II w/labs	CHE 101 and CHE 102	10 cr.
Physics I and II w/labs	PHY 101 Lec/Rec & PHY 151 lab and PHY 102 Lec/Rec & PHY 152 Lab	10 cr.
Calculus	MTH 121, MTH 131 or MTH 141 *Pre-calculus is NOT accepted	4 cr.
Statistics	STA 119 Lec/Rec	4 cr.
Psychology	PSY 101	3 cr.
Science of Human Movement	ES 200	3 cr.
Human Nutrition	NTR 108	3 cr.
Public Health	PUB 101	3 cr.

- ❖ Applicants who plan to take prerequisite courses at institutions other than the University at Buffalo should visit <http://taurus.buffalo.edu> to determine if a particular course will transfer to UB. Only equivalent courses will be accepted. Questions about prerequisite courses can be directed to the Office for Academic & Student Affairs at sphhp-oasa@buffalo.edu.
- ❖ All above prerequisite courses must be completed prior to starting the upper division.

BS IN GENERAL EXERCISE SCIENCE

NOTE: This is only a recommended sequence. Students can choose their own sequence of prerequisite courses based on strengths and/or preferences, and should work with their advisor to plan appropriately. Upper division courses should be completed in the order documented.

<u>First Year (Fall)</u>		<u>First Year (Spring)</u>	
CHE 101 Chem I	5 cr.	CHE 102 Chem II	5 cr.
MTH 121 Calculus	4 cr.	STA 119	4 cr.
UB Seminar	3 cr.	NTR 108 Nutrition	3 cr.
PUB 101	3 cr.	ENG 105	4 cr.
<u>Total credits</u>	<u>15 credits</u>	<u>Total credits</u>	<u>16 cr.</u>

<u>Second Year (Fall)</u>		<u>Second Year (Spring)</u>	
PHY 101&151 Physics I	5 cr.	PHY 102&152 Physics II	5 cr.
ES 207* Human Form & Function	4 cr.	PGY 300 Physiology	4 cr.
PSY 101	3 cr.	ES 200 Human Movement**	3 cr.
PHI 237	3 cr.	Global Pathway	3 cr.
		Global Pathway	3 cr.
<u>Total credits</u>	<u>15 cr.</u>	<u>Total credits</u>	<u>18 cr.</u>

*The Anatomy requirement can also be satisfied by taking APY 345/346 in the spring of the sophomore year instead of ES 207. **ES 200 may be taken in the spring of the freshman or sophomore year.

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 Student must apply and be accepted to the Professional Sequence before beginning the upper division sequence below.

<u>Third Year (Fall)</u>		<u>Third Year (Spring)</u>	
ES 442 Applications	1 cr.	ES 310 Ex Assess & Prescr I	4 cr.
ES 380 Exercise Physiology	3 cr.	ES 370 Biomechanics	4 cr.
ES 300 Athletic Injury	3 cr.	ES 330 Lifespan Physiology	3 cr.
ES 341 Critical Analysis	2 cr.	UBC 399 UB Capstone	1 cr.
ES 342 Neuroscience	3 cr.	ENG 285 or equivalent	3 cr.
ES elective	3 cr.		
<u>Total credits</u>	<u>15 cr.</u>	<u>Total credits</u>	<u>15 cr.</u>

<u>Summer Session</u>	
ANA 407 Gross Anatomy	<u>6 cr.</u>

<u>Fourth Year (Fall)</u>		<u>Fourth Year (Spring)</u>	
ES 340 Special Cases	3 cr.	ES 429 Internship	12 cr.**
ES 402 Exercise Nutrition	2 cr.	**Must have all classes completed, including ES electives, and at least a 2.0 GPA	
ES 410 Ex Assess & Prescr II	3 cr.		
ES 450 Prof Development	1 cr.		
ES elective	3 cr.		
<u>Total credits</u>	<u>12 cr.</u>	Total credits	<u>12 cr.</u>

General BS in ES curriculum requires 9 credits of approved elective coursework. Approved elective courses are listed on page 6.

Approved Electives for ES

The following courses are approved ES electives. A total of 9 credits are required for the General Exercise Science Track and need to be completed before the student registers for ES 429 Internship.

BCH 403	Biochemical Principles (4)**
BIO 200	Evolutionary Biology (5)
BIO 201	Cell Biology (4)
BIO 205/215	Fundamentals of Biological Chemistry (3/2)**
CHE 201/202	Organic Chemistry (5/5)
CHE 203/204	Organic Chemistry (without lab, 3/3)
ES 344	Neuroanatomy Lab I (1)*
ES 428	Health Promotion, Prevention and Wellness (3)
ES 435	Health Coaching (3)
ES 461	Special Topics in Exercise Science (1-3)
ES 472	Environmental Physiology (3)
ES 496	Practicum (1 - 3 credits)
ES 497	Honors Thesis
ES 499	Independent Study (1-4 credits)
MIC 301	Microbiology for Allied Health Professionals (4)
MT 401	Clinical Biochemistry (4)**
NTR 301	Dietary Assessment (1)
NTR 401	Nutrition and Health (3)
NTR 402	Nutrition in the Life Cycle (3)
OT 217	Medical Terminology (1)
PGY 412	Applied Physiology (2)
PGY 451	Human Physiology I (3)
PGY 452	Human Physiology II (3)
PHI 237/SSC 237	Social and Ethical Values in Medicine (3)
PMY 302	Introduction to Pharmacology (4)
PSY 322	Abnormal Psychology (3)
PSY 325	Health Psychology (3)
PSY 336	Developmental Psychology (3)
PSY 351	Biopsychology (3)
PSY 438	Sport & Exercise Psychology (3)

* For students in Pre-DPT track only.

** Students can only use one Biochemistry course towards their electives.

Any other courses to be used as electives must be submitted for approval. Course descriptions are available at our website or in the Undergraduate Catalog.

PRE-PHYSICAL THERAPY

NOTE: This is only a recommended sequence. Students can choose their own sequence of prerequisite courses based on strengths and/or preferences, and should work with their advisor to plan appropriately. Upper division courses should be completed in the order documented.

<u>First Year (Fall)</u>		<u>First Year (Spring)</u>	
CHE 101	5 cr.	CHE 102 Chem II	5 cr.
MTH 121 Calculus	4 cr.	STA 119	4 cr.
PUB 101	3 cr.	NTR 108 Nutrition	3 cr.
UB Seminar	3 cr.	ENG 105	4 cr.
<u>Total credits</u>	<u>15 credits</u>	<u>Total credits</u>	<u>16 cr.</u>

<u>Second Year (Fall)</u>		<u>Second Year (Spring)</u>	
PHY 101&151 Physics I	5 cr.	PHY 102&152 Physics II	5 cr.
ES 207* Human Form & Function	4 cr.	PGY 300 Physiology	4 cr.
PSY 101	3 cr.	ES 200 Human Movement**	3 cr.
PHI 237	3 cr.	Global Pathway	3 cr.
		Global Pathway	3 cr.
<u>Total credits</u>	<u>15 cr.</u>	<u>Total credits</u>	<u>18 cr.</u>

*The Anatomy requirement can also be satisfied by taking APY 345/346 in the spring of the sophomore year instead of ES 207. **ES 200 may be taken in the spring of the freshman or sophomore year.

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 Student must apply and be accepted to the Professional Sequence before beginning the upper division sequence below.

<u>Third Year (Fall)</u>		<u>Third Year (Spring)</u>	
ES 442 Applications	1 cr.	ES 310 Ex Assess & Prescr I	4 cr.
ES 342 Neuroscience I	3 cr.	ES 370 Biomechanics	4 cr.
ES 344 Neuroanatomy I Lab	1 cr.	ES 330 Lifespan Physiology	3 cr.
ES 380 Exercise Physiology	3 cr.	ENG 285 or equivalent	3 cr.
ES 300 Athletic Injury	3 cr.	UBC 399 UB Capstone	1 cr.
ES 341 Critical Analysis	2 cr.		
ES Elective	3 cr.		
<u>Total credits</u>	<u>16 cr.</u>	<u>Total credits</u>	<u>15 cr.</u>

<u>Summer Session</u>	
ANA 407 Gross Anatomy	<u>6 cr.</u>

- Students apply to the Doctor of Physical Therapy (DPT) program by November 1st (Refer to page 3 for complete details). Students that are accepted in their third year will leave the Exercise Science Undergraduate program and will not receive a BS in Exercise Science.
- Alternatively, students may decide to complete the 4-year BS in ES and apply to the DPT program during their fourth year in the program.

BS IN EXERCISE SCIENCE / MS IN NUTRITION

- 1- Student must complete all prerequisite courses.
- 2- Apply and be accepted to the Professional Sequence of ES before beginning the upper division.
- 3- Once enrolled in the upper division, student must then apply to the MS program.

First & Second Year:

Complete prerequisite sequence as outlined in General ES Track.

Third Year (Fall)		Third Year (Spring)	
ES 342 Neuroscience I	3 cr.	ES 370 Biomechanics	4 cr.
ES 380 Exercise Physiology	3 cr.	CHE 204 Organic Chem II	3 cr.
ES 341 Critical Analysis	2 cr.	NTR 402 Nutr in Lifecycle	3 cr.
CHE 203 Organic Chem I	3 cr.	ES 310 Ex Assess, Prescription, and Programming	4 cr.
NTR 301 Dietary Assessment	1 cr.	Electives – undergrad *ES 330 recommended	0-3 cr.
ENG 285 or equivalent	3 cr.		
ES 442 Applications (optional)	1 cr.		
Total credits	15-16 UGRD cr.	Total credits	14-17 UGRD cr.

Summer Session

ANA 407 Gross Anatomy	6 cr.
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Fourth Year (Fall)		Fourth Year (Spring)	
ES 340 Special Cases	3 cr.	NTR 600 Pathophys*	3 cr.
ES 410 Ex Assess & Prescr II	3 cr.	ES 496 Practicum	3 cr.
NTR 505 Exercise Nutrition	2 cr.	Biochem (MT 401, BCH 403, BIO 205)	3-4 cr.
NTR 503 Nutrition and Health	3 cr.	Electives – 500/600 level	3 cr.
UBC 399 UB Capstone	1 cr.		
Elective (300/400)	0-3 cr.		
Total credits	7-10 UGRD cr. 5 grad cr.	Total credits	6-7 UGRD cr. 6 grad cr.

Fifth Year (Fall)		Fifth Year (Spring)	
PGY 551 Human Physiology	3 cr.	PGY 552 Human Physiology	3 cr.
NTR 500 Energy and Protein	3 cr.	NTR 501 Vitamins/Minerals	3 cr.
NTR 630 Seminar	2 cr.	EEH 500 Intro to Epi	3 cr.
STA 527 - Grad Stats	4 cr.	NTR 675 or 676 or 680**	2 cr.***
Electives – 500/600 level *NTR 523 Nut Assess recommended	2 cr.	Electives – 500/600 level	0-3 cr.
Total credits	14 grad cr.	Total credits	11-14 grad cr.

*NTR 600 required for students taking Comp Exam or Project Option. NOT required for students in Thesis track.

** NTR 680 is for students in the Thesis track only

*** Credit hours taken will vary (2-6 cr.) based on track option (Project, Comp Exam, or Thesis)

Students in the BS/MS need 6 credits of UGRD electives.

Admissions: After beginning the upper division the student MUST submit a supplemental application by the first academic day in March of their first year in the upper division (third year). More information regarding admissions, retention and graduation requirements can be found at <http://sphhp.buffalo.edu/ens>.

Note: NTR 501 may be taken in the spring of the fourth year. STA 527 may be substituted with other approved graduate level statistics course approved by Graduate Program Director.

Contact Jennifer Temple, PhD, Graduate Program Director at jtemple@buffalo.edu for elective suggestions and questions regarding the graduate program.

BS IN EXERCISE SCIENCE/MS IN ATHLETIC TRAINING

Admissions – Freshman can apply and be accepted directly into the combined program. To maintain good standing in the combined program, students must maintain a GPA > 2.75 and receive a grade of C or better in all required courses. To be accepted to the graduate portion of the combined program, students must submit a graduate application in the spring of their 3rd year. To maintain good standing in the graduate portion of the program students must maintain a 3.0 or higher GPA in graduate courses.

Applications to the combined degree program will be evaluated by the Director of Graduate Study/Graduate Admissions Committee, based on each student’s written personal statement of career goals, their GRE or MCAT test results and (for foreign applicants) TOEFL scores, prior transcripts and experience, and two letters of recommendation.

<u>First Year (Fall)</u>		<u>First Year (Spring)</u>	
CHE 101 Chem 1	5 cr.	Global Pathway 1	3 cr.
MTH 121 Calculus	4 cr.	STA 119	4 cr.
PUB 101	3 cr.	NTR 108 Nutrition	3 cr.
UB Seminar	3 cr.	ENG 105	4 cr.
		Diversity Learning	3 cr.
<u>Total credits</u>	<u>15 credits</u>	<u>Total credits</u>	<u>17 credits</u>

<u>Second Year (Fall)</u>		<u>Second Year (Spring)</u>	
ES 207	4 cr.	PGY 300	4 cr.
PHY101/151	5 cr.	ES 200 Human Movt*	3 cr.
PHI 237 Med Ethics	3 cr.	Global Pathway	3 cr.
PSY 101 Psychology	3 cr.	ENG 285 or equivalent	3 cr.
ES 1XX Intro to AT 1	1 cr.	ES 1XX Intro to AT 2	1 cr.
<u>Total credits</u>	<u>16 credits</u>	<u>Total credits</u>	<u>14 credits</u>

*ES 200 may be taken in the spring of the freshman or sophomore year.

Students interested in the BS/MS in ES and Athletic Training should meet with an academic advisor to discuss their curricular plan. The curriculum for years 3-5 are currently undergoing revisions to satisfy updated Commission on Accreditation of Athletic Training Education (CAATE) requirements.

BS IN EXERCISE SCIENCE / MPH IN EPIDEMIOLOGY

- 1- Student must complete all prerequisite courses.
- 2- Apply and be accepted to the Professional Sequence of ES before beginning the upper division.
- 3- Once enrolled in the upper division, student must then apply to the MPH program.

First & Second Year:

Complete prerequisite sequence as outlined in General ES Track.

Third Year (Fall)		Third Year (Spring)	
ES 342 Neuroscience I	3 cr.	ES 370 Biomechanics	4 cr.
ES 380 Exercise Physiology	3 cr.	NTR 402 Nutr in Lifecycle or ES 330 Lifespan Physiology	3 cr.
ES 341 Critical Analysis	2 cr.	ES 310 Ex Assess & Presc I	4 cr.
ES 300 Athletic Injury	3 cr.	ENG 285 or equivalent	3 cr.
ES 442 Applications	1 cr.	UBC 399 UB Capstone	1 cr.
ES Elective – undergrad	3 cr.		
Total credits	15 UGRD cr.	Total credits	15 UGRD cr.
Third Year (Summer Session)			
ANA 407 Gross Anatomy		6 cr.	

Fourth Year (Fall)		Fourth Year (Spring)	
ES 340 Special Cases	3 cr.	ES 496 Practicum	3 cr.
ES 410 Ex Assess & Prescr II	3 cr.	EEH 502 Adv. Methodology	3 cr.
ES 402 Exercise Nutrition	2 cr.	EEH 506 Appl Biostat to Epi II	4 cr.
EEH 501 Epi Principles	4 cr.	EEH 531 Admin Theory & Prac	3 cr.
EEH 505 Appl Biostat to Epi I	4 cr.	EEH 520 Biologic Basis of Public Health (can be waived)	3 cr.
Total credits	8 UGRD cr. 8 grad cr.	Total credits	3 UGRD cr. 13 grad cr.
Fourth Year (Summer Session)			
EEH544 MPH Field Training		3 cr.	
Total credits		3 grad cr.	

Fifth Year (Fall)		Fifth Year (Spring)	
EEH 530 Intro to Health Care Org	3 cr.	EEH 550 Environ. Health	3 cr.
CHB 501 Study of Health Behavior	3 cr.	EEH 630 Integrative Project	3 cr.
EEH 573 Epi of Infec Diseases	3 cr.	EEH 590 PH Seminar	0 cr.
EEH 590 PH Seminar	0 cr.	Epi Electives (2 courses)	6 cr.
Epi Elective	3 cr.		
Total credits	12 grad cr.	Total credits	12 grad cr.

Admissions: After beginning the upper division the student MUST submit a supplemental application to the MPH Program. More information regarding admissions, retention and graduation requirements can be found at <http://sphhp.buffalo.edu/eeh>.

Note: Students MUST meet with advisor in the MPH program once accepted to the upper division of ES to develop a plan of success. **Students in the BS/MPH need 6 cr. of UGRD electives and 9 cr. of Grad (PH) electives.**

HEALTH AND WELLNESS MINOR

The Health and Wellness minor is an interdisciplinary program that gives students a foundation in the concepts of health promotion and wellness education. Courses in the minor are offered through the departments of Community Health and Health Behavior, Exercise and Nutrition Sciences, Psychology, Counseling and Educational Psychology, and Wellness Education Services (UB experience work). The program will examine theories and research related to health promotion in order to provide a foundation in the concepts of healthy living and prepare students for careers in health and wellness.

The minor can also provide a solid foundation for enrolling in UB's Master of Public Health (MPH) program with a concentration in [Community Health and Health Behavior](#) (CHHB). Students interested in the MPH should talk with their advisors to ensure that the most appropriate electives are selected. Questions about the MPH in CHHB can be directed to the Concentrations Director, Dr. Gregory Homish (ghomish@buffalo.edu).

<u>REQUIRED COURSES:</u> (11 credits)	
ES 102 Fundamentals of Wellness **offered Fall semester only**	3 cr.
UBE 110 (section WES)- Introduction to Peer Education	2 cr.
ES 428 Health Promotion, Prevention & Wellness *Offered Fall semester only *	3 cr.
Practical Experience: *Pick one*	3 cr.
<ul style="list-style-type: none"> • UBE 496 (section WE2) Universal Yoga <u>or</u> • UBE 496 (section WE3) Nutrition and Environment <u>or</u> • ES 496 (Section MED)- Practicum (at a wellness-oriented site) 	

<u>ELECTIVES:</u> <i>These courses are approved electives (must take 3 courses)</i>	
ES 200 Introduction to Human Movement*	3 cr.
ES 435 Health Coaching & Behavior Modification	3 cr.
NTR 401 Nutrition and Health	3 cr.
NTR 402 Nutrition and the Lifecycle	3 cr.
CHB 501 Study of Health Behaviors**	3 cr.
CHB 502 Health Behavior Change**	3 cr.
CHB 538 Community Health Assessment and Surveillance**	3 cr.
CEP 401 Introduction to Counseling	3 cr.
CEP 404 Introduction to the Rehabilitation of Substance Abuse and Addiction	3 cr.
NSG 368 Research in Human Sexuality	3 cr.
PSY 322 Abnormal Psychology	3 cr.
PSY 325 Health Psychology	3 cr.
PSY 336 Developmental Psychology	3 cr.
PSY 404 Alcohol and Health	3 cr.
PSY 438 Sport & Exercise Psychology	3 cr.
UBE 496 (WE1) Special Projects in Wellness or Health & Wellness Peer Education***	3 cr.

* ES students must take a different elective

** Only one 500-level course can be taken for undergraduate credit

*** Must complete ES 102 and UBE 110 (WES) prior to registering for this course

HEALTH AND WELLNESS MINOR

RECOMMENDED COURSE SEQUENCE:

<u>First Year (Fall)</u>		<u>First Year (Spring)</u>	
ES 102 Fundamentals of Wellness	3 cr.	UBE 110 (Section WES) Introduction to Peer Education	2 cr.
<u>Second Year (Fall)</u>		<u>Second Year (Spring)</u>	
UBE 496 (section WE2) or ES 496 (Section MED) Practicum (at a wellness-oriented site)	3 cr.	Elective or UBE 496*** (Section WE3)	3 cr.
<u>Third Year (Fall)</u>		<u>Third Year (Spring)</u>	
ES 428 Health Promotion, Prevention & Wellness (3 cr.) Elective	3 cr.	Elective (3 cr.)	3 cr.

The Health and Wellness minor includes courses related to prevention, health maintenance and health education, within the context of health and wellness promotion for diverse populations. A variety of issues will be addressed, including obesity, tobacco use, sexual health, violence prevention, alcohol use, exercise and nutrition. The minor requires a practicum experience to provide an opportunity for application of knowledge. These practical experiences offer emphasis in the areas of: wellness in the campus environment, corporate or community health promotion.

Application & Admission Requirements

Apply online at <http://goo.gl/aE78jb>.

In order to be accepted into the minor, students must:

- Be a matriculated undergraduate student in a major at UB with at least one semester of coursework completed
- Have a minimum overall GPA of 2.5

Applications are accepted on an on-going basis but are reviewed once a month. Enrollment to the minor may be limited.

**Students seeking advisement on the Health and Wellness minor should contact the Office for Academic and Student Affairs (OASA) at (716) 829-5000 or sphhp-oasa@buffalo.edu.

NUTRITION MINOR

The minor in Nutrition provides undergraduate students with a foundation in human nutrition. Upon completion of the minor, students should be able to: recognize the macronutrients and micronutrients basic chemistry, roles in the body, food sources and recommended intakes; explain the nutritional requirements/challenges during pregnancy, lactation, infancy, childhood, adulthood and older adulthood; explain the relationship between nutritional deficiencies and specific chronic disease throughout the lifespan; explain the relationship between some current public health issues and nutritional habits; effectively utilize dietary assessment tools to analyze individuals and populations; and interpret and apply findings from empirical nutritional research. Given the role that nutrition plays in chronic disease, mental health, public health, and physical activity, this minor would complement many majors that currently exist on campus and allow students to explore nutrition in more depth while pursuing other disciplines, such as Exercise Science, Public Health, Psychology, Occupational Therapy, and Nursing.

<u>REQUIRED COURSES:</u> (14 credits)	
NTR 108 Human Nutrition	3 cr.
NTR 109 Nutrition in Practice	3 cr.
NTR 110 Nutrition in Practice Lab	1 cr.
NTR 301 Dietary Assessment	1 cr.
NTR 401 Nutrition and Health	3 cr.
NTR 402 Nutrition in the Lifecycle	3 cr.
<u>ELECTIVES:</u> (must take 2: 5-6 credits and must have completed the appropriate prerequisite courses where applicable)	
BCH 403 Biochemistry (Prerequisites: BIO 200 and CHE 202)	3 cr.
BIO 201 Cell Biology	4 cr.
BIO 203 General Physiology (Prerequisites: BIO 200 and BIO 201)	3 cr.
CHE 201 Organic Chemistry	3 cr.
ES 428 Health Promotion, Prevention and Wellness	3 cr.
PGY 300 Human Physiology (Prerequisites: ANA 113, ES 207, CHE 101, CHE 105, CHE 107, CHE 111 or BIO 200 with a grade of C)	3 cr.
PGY 412 Applied Physiology (Prerequisites: PGY 300, PGY 451 or PGY 452)	2 cr.
PSY 325 Health Psychology	3 cr.
PSY 404 Alcohol and Health	3 cr.

NUTRITION MINOR

RECOMMENDED COURSE SEQUENCE:

<u>First Year (Fall)</u>		<u>First Year (Spring)</u>	
NTR 108 Human Nutrition	3 cr.	NTR 109 Nutrition in Practice	3 cr.
		NTR 110 Nutrition in Practice Lab	1 cr.
<u>Second Year (Fall)</u>		<u>Second Year (Spring)</u>	
NTR 301 Dietary Assessment	1 cr.	Elective	2-4 cr.
Elective	2-4 cr.		
<u>Third Year (Fall)</u>		<u>Third Year (Spring)</u>	
NTR 401 Nutrition and Health	3 cr.	NTR 402 Nutrition and the Lifecycle	3 cr.

***Please note: The Nutrition minor does not lead to registered dietitian licensure or allow you to practice as an RD.**

Application & Admission Requirements

Apply online at <http://goo.gl/sFSF2i>.

In order to be accepted into the minor, students must:

- Be a matriculated undergraduate student in a major at UB with at least one semester of coursework completed
- Have a minimum overall GPA of 2.5

Applications are accepted on an ongoing basis. Students must achieve a C or better in all courses that apply toward their minor in Nutrition.

Students seeking advisement on the Nutrition Minor should contact the Office for Academic and Student Affairs (OASA) at (716) 829-5000 or sphp-oasa@buffalo.edu.

CAREER CHOICES FOR EXERCISE SCIENCE STUDENTS

Graduating students are ideal candidates for advanced degrees in exercise physiology, athletic training, biomechanics, public health, business administration, medicine, chiropractic, physical therapy, or physician's assistant. In addition, graduates are well prepared for entry-level positions that focus on rehabilitation, prevention of injury and disease, health and wellness and/or performance enhancement. Students can also improve their professional credibility by earning specialized certifications, such as the American College of Sports Medicine Certified Exercise Physiologist (EP-C®) or and the National Strength and Conditioning Association Certified Strength & Conditioning Specialist (CSCS®).

Alumni in Exercise Science have found employment in the following areas:

- Cardiac & Pulmonary Rehabilitation (hospitals, clinics)
- Health, Fitness & Wellness (corporate, commercial, community)
- Strength and Conditioning programs (collegiate and professional level)
- Sports Performance

General Information

For information about registration, financial aid, student accounts, or academic advising, please contact:

Student Services: 1Capen, North Campus <https://1capen.buffalo.edu/>

Housing Information: (716) 645-2171 <http://www.ub-housing.buffalo.edu/>

Registration Information: (716) 645-5698 <http://registrar.buffalo.edu/>

Student Accounts: (716) 645-1800 <http://studentaccounts.buffalo.edu/>

Exercise & Nutrition Science: (716) 829-2941 <http://sphhp.buffalo.edu/ens>

SPHHP's Office for Academic and Student Affairs: (716) 829-5000 or
<https://sphhp.buffalo.edu/home/education/undergraduate-advisement.html>

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UB Department of Exercise and Nutrition Sciences: <https://www.facebook.com/ub.sphhp.ens>

UB School of Public Health and Health Professions: <https://www.facebook.com/sphhp>

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