

EXERCISE PHYSIOLOGY (EXPH)

EXPH 50612 EXERCISE LEADERSHIP FOR THE OLDER ADULT 3 Credit Hours

(Cross-listed with EXSC 40612) Designed to provide the students with a knowledge base in exercise leadership in the senior population and includes special populations. Students participate in the leading supervision and evaluation of the participant within the exercise program. They also assist in the collection of functional fitness data.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 53093 VARIABLE TITLE WORKSHOP IN EXERCISE SCIENCE AND EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) (Slashed with EXSC 43093) Workshop in exercise science or physiology, topics vary.

Prerequisite: Graduate standing.

Schedule Type: Workshop

Contact Hours: 1-3 other

Grade Mode: Satisfactory/Unsatisfactory

EXPH 55040 ADVANCED STRENGTH AND CONDITIONING 3 Credit Hours

(Slashed with EXSC 45040) Advanced principles in strength and conditioning. Learn and understand the energy systems, anatomy, physiology and proper lifting technique of strength, speed, agility and conditioning exercises for practical application with athletes.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 55065 EXERCISE TESTING 3 Credit Hours

(Cross-listed with EXSC 45065) Lecture and laboratory experiences dealing with the administration and interpretation of exercise tests.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 55070 ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST 3 Credit Hours

(Cross-listed with EXSC 45070) Designed to provide students with the knowledge base in electrocardiography. Students work on interpreting the 12-lead electrocardiogram with clinical case studies to enhance the knowledge base of the exercise specialist.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 55081 ADVANCED PHYSIOLOGY OF EXERCISE 3 Credit Hours

(Slashed with EXSC 45081) This course is designed to provide an augmented understanding of acute and chronic responses to exercise. Focus is placed on understanding the physiological responses at both the systems and the cellular levels. Emphasis is placed on muscle bioenergetics, environmental physiology, ergogenic aids, sex differences, extreme sports, children and adolescents in sport and exercise and a greater understanding of muscle and cardiorespiratory responses to exercise.

Prerequisite: Graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 60610 PHYSIOLOGY OF AGING: IMPLICATIONS FOR HUMAN BEHAVIOR 3 Credit Hours

(Cross-listed with EXPH 70610) Examine physiological changes which accompany advancing age. Special attention is paid to the effect of these changes on sensory motor and cognitive behavior.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 63050 RESEARCH PROCESS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY 3 Credit Hours

(Cross-listed with EXPH 73050) The research process and statistical concepts applied to athletic training and exercise physiology.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 63051 QUANTITATIVE AND RESEARCH METHODS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY 3 Credit Hours

(Slashed with EXPH 73051) Research design and statistical methods applied to exercise, physiology and athletic training.

Prerequisite: EXPH 63050; and graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 63091 RESEARCH SEMINAR 1 Credit Hour

(Repeatable for credit) (Slashed with EXPH 73091) Presentation and discussion of research by faculty and students. A total of 2 credits may be applied toward degree requirements.

Prerequisite: Graduate standing.

Schedule Type: Seminar

Contact Hours: 1 other

Grade Mode: Satisfactory/Unsatisfactory

EXPH 63096 INDIVIDUAL INVESTIGATION IN EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) (Slashed with EXPH 73096) Independent study completed under the supervision of a faculty member. Written approval of supervising faculty member and School Director required prior to registration.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-9 other

Grade Mode: Standard Letter-IP

EXPH 63098 RESEARCH 1-15 Credit Hours

(Repeatable for credit) Research carried out by the student under the supervision of a faculty member.

Prerequisite: Graduate standing.

Schedule Type: Research

Contact Hours: 1-15 other

Grade Mode: Standard Letter-IP

EXPH 63193 VARIABLE TITLE WORKSHOP IN EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) Workshop in exercise physiology; topics vary. Maximum 4 hours applied to the degree.

Prerequisite: Graduate standing.

Schedule Type: Workshop

Contact Hours: 1-3 other

Grade Mode: Satisfactory/Unsatisfactory

EXPH 63195 SPECIAL TOPICS IN EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) (Slashed with EXPH 73195) Selected and varied topics of relevance in exercise physiology.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

EXPH 63199 THESIS I 2-6 Credit Hours

(Repeatable for credit) Thesis students must register for a total of 6 hours, 2 to 6 hours in a semester distributed over several semesters if desired.

Prerequisite: Graduate standing.

Schedule Type: Masters Thesis

Contact Hours: 3 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EXPH 63299 THESIS II 2 Credit Hours

Thesis students must continue registration each semester until all degree requirements are met.

Prerequisite: EXPH 63199; and graduate standing.

Schedule Type: Masters Thesis

Contact Hours: 2 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EXPH 65075 MUSCLE FUNCTION AND EXERCISE 3 Credit Hours

(Slashed with EXPH 75075) Characteristics of skeletal muscle related to contraction during exercise, strength, elasticity, fatigue, and training. Electromyograph analysis of muscle function emphasized.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 65076 ENVIRONMENTAL STRESS AND EXERCISE 3 Credit Hours

(Slashed with EXPH 75076) Effects of heat, cold, pressure, pollution and psychological stress upon physiological responses to exercise. Lecture and laboratory.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65080 PHYSIOLOGICAL BASIS OF EXERCISE AND SPORT 3 Credit Hours

(Slashed with EXPH 75080) Application of physiological concepts to human performance. Includes role of testing, training strength and endurance, nutritional considerations, environmental influences and, adapted exercise programs.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65081 ENERGY METABOLISM AND BODY COMPOSITION 3 Credit Hours

(Slashed with EXPH 75081) Measurement of metabolic response to exercise. Topics include ergometry spirometry energy expenditure body composition and performance correlates of strength power and endurance.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 65082 CARDIO-RESPIRATORY FUNCTION 3 Credit Hours

(Slashed with EXPH 75082) Measurement of the cardiovascular-respiratory response to exercise. Includes resting spirometry, lung function during exercise, electrocardiography, blood pressure, PWC testing and exercise prescription.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 65083 EXERCISE ENERGY METABOLISM 3 Credit Hours

(Slashed with EXPH 75083) Energy transformations during exercise. Emphasis on controlling mechanisms that regulate the anabolic and catabolic responses to both acute and chronic exercise.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65084 CARDIOVASCULAR-RESPIRATORY DYNAMICS DURING EXERCISE 3 Credit Hours

(Slashed with EXPH 75084) Responses of the cardiovascular and respiratory systems to exercise. Use of noninvasive methods to measure cardio-respiratory function emphasized. Lecture and laboratory.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65086 NEUROBIOLOGY OF MOVEMENT AND EXERCISE 3 Credit Hours

(Slashed with EXPH 75086) Provide students with knowledge to understand the role of the muscular and nervous systems in human movement and exercise. Motor disorders and rehabilitation techniques will also be discussed. Lecture and laboratory.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65192 INTERNSHIP IN EXERCISE PHYSIOLOGY 1-9 Credit Hours

(Repeatable for a maximum of 9 credit hours) Field experience in exercise physiology programs and testing in Kent State University adult fitness program or cooperating agencies.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 3-27 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EXPH 70610 PHYSIOLOGY OF AGING:IMPLICATIONS FOR HUMAN BEHAVIOR 3 Credit Hours

(Slashed with EXPH 60610) Examine physiological changes which accompany advancing age. Special attention is paid to the effect of these changes on sensory motor and cognitive behavior.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 73050 RESEARCH PROCESSES IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY 3 Credit Hours

(Slashed with EXPH 63050) The research process and statistical concepts applied to athletic training and exercise physiology.

Prerequisite: Doctoral standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 73051 QUANTITATIVE AND RESEARCH METHODS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY 3 Credit Hours

(Slashed with EXPH 63051) Research design and statistical methods applied to exercise physiology and athletic training.

Prerequisite: EXPH 73050; and doctoral standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 73091 RESEARCH SEMINAR 1 Credit Hour

(Repeatable for credit) Presentation and discussion of research by faculty and students. A total of 2 credits may be applied toward degree requirements.

Prerequisite: Doctoral standing.

Schedule Type: Seminar

Contact Hours: 1 other

Grade Mode: Satisfactory/Unsatisfactory

EXPH 73096 INDIVIDUAL INVESTIGATION IN EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) (Slashed with EXPH 63096) Independent student completed under the supervision of a faculty member. Written approval of supervising faculty member and School Director required prior to registration.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 1-3 other

Grade Mode: Standard Letter-IP

EXPH 73195 SPECIAL TOPICS IN EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) (Slashed with EXPH 63195) Selected and varied topics of relevance in exercise physiology.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

EXPH 75004 BIOMECHANICS 3 Credit Hours

(Cross-listed with ATTR 65004) Survey of biomechanics, with particular emphasis on skeletal muscle mechanics.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 75075 MUSCLE FUNCTION AND EXERCISE 3 Credit Hours

(Slashed with EXPH 65075) Characteristics of skeletal muscle related to contraction during exercise, strength, elasticity, fatigue and training. Electromyograph analysis of muscle function emphasized.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 75076 ENVIRONMENTAL STRESS AND EXERCISE 3 Credit Hours

(Slashed with EXPH 65076) Effects of heat, cold, pressure, pollution and psychological stress upon physiological responses to exercise. Lecture and laboratory.

Prerequisite: Doctoral standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 75080 PHYSIOLOGICAL BASIS OF EXERCISE AND SPORT 3 Credit Hours

(Slashed with EXPH 65080) Application of physiological concepts to human performance. Includes role of testing, training, strength and endurance, nutritional considerations, environmental influences, and adapted exercise programs.

Prerequisite: Doctoral standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 75081 ENERGY METABOLISM AND BODY COMPOSITION 3 Credit Hours

(Slashed with EXPH 65081) Measurement of metabolic response to exercise. Topics include ergometry, spirometry, energy expenditure, body composition and performance correlates of strength, power and endurance.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 75082 CARDIO-RESPIRATORY FUNCTION 3 Credit Hours

(Cross-listed with EXPH 65082) Measurement of the cardiovascular-respiratory response to exercise. Includes resting spirometry, lung function during exercise, electrocardiography, blood pressure, PWC testing and exercise prescription.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

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(Slashed with EXPH 65083) Energy transformations during exercise. Emphasis on controlling mechanisms that regulate the anabolic and catabolic responses to both acute and chronic exercise.

Prerequisite: Doctoral standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 75084 CARDIOVASCULAR-RESPIRATORY DYNAMICS DURING EXERCISE 3 Credit Hours

(Slashed with EXPH 65084) Responses of the cardiovascular and respiratory systems to exercise. Use of noninvasive methods to measure cardio-respiratory function emphasized. Lecture and laboratory.

Prerequisite: Doctoral standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 75086 NEUROBIOLOGY OF EXERCISE AND MOVEMENT 3 Credit Hours

(Slashed with EXPH 65086) Provides students with knowledge to understand the role of the muscular and nervous systems in human movement and exercise. Motor disorders and rehabilitation techniques will also be discussed. Lecture and laboratory.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 75192 INTERNSHIP IN EXERCISE PHYSIOLOGY 1-9 Credit Hours

(Repeatable for a maximum of 9 credit hours) Field experience in exercise physiology programs and testing in Kent State University adult fitness program or cooperating agencies.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 3-27 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EXPH 83098 RESEARCH 1-15 Credit Hours

(Repeatable for credit) Research for doctoral students.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Research

Contact Hours: 1-15 other

Grade Mode: Standard Letter-IP

EXPH 83199 DISSERTATION I 15 Credit Hours

(Repeatable for credit) Doctoral dissertation, for which registration in at least two semesters is required, first of which will be semester in which dissertation work is begun and continuing until the completion of 30 hours.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Dissertation

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EXPH 83299 DISSERTATION II 15 Credit Hours

(Repeatable for credit) Continuing registration required of doctoral students who have completed the initial 30 hours of dissertation and continuing until all degree requirements are met.

Prerequisite: EXPH 83199; and doctoral standing.

Schedule Type: Dissertation

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP