

EXERCISE PHYSIOLOGY (EXP)

Subject-area course lists indicate courses currently active for offering at the University of Louisville. Not all courses are scheduled in any given academic term. For class offerings in a specific semester, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>).

500-level courses generally are included in both the undergraduate- and graduate-level course listings; however, specific course/section offerings may vary between semesters. Students are responsible for ensuring that they enroll in courses that are applicable to their particular academic programs.

Course Fees

Some courses may carry fees beyond the standard tuition costs to cover additional support or materials. Program-, subject- and course-specific fee information can be found on the Office of the Bursar website (<http://louisville.edu/bursar/tuitionfee/>).

EXP 501. Applied Exercise Physiology 3 Units

Term Typically Offered: Fall Only

Prerequisite(s): Consent of instructor.

Description: Selective review of the pertinent areas of basic physiology and the application of this knowledge to exercise conditions. Consists of both lecture and laboratory format.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

EXP 502. Principles of Exercise Testing and Prescription 3 Units

Term Typically Offered: Spring Only

Prerequisite(s): EXP 501 or consent of instructor.

Description: Effects of exercise to prevent coronary heart disease and atherosclerosis; specific effects of exercise on the established risk factors. Exercise as a rehabilitative measure in heart attack recovery.

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EXP 503. Clinical Exercise Physiology 3 Units

Prerequisite(s): EXP 502 or consent of instructor.

Description: This course provides students with in-depth content regarding the physiology of exercise specifically related to clinical populations.

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EXP 600. Exercise Biochemistry 3 Units

Term Typically Offered: Fall, Spring

Prerequisite(s): EXP 501 and EXP 605 or consent of instructor.

Description: Effects of physical activities and work-related stress on the human organism. Includes energy liberation, circulation and respiration, physical work capacity, physical training, energy cost of various activities, nutrition and performance, temperature regulation, factors affecting performance and fitness, physiology of various sport activities. Laboratory demonstrations and projects and discussion of current literature. Spring.

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EXP 601. Laboratory Methods in Exercise Physiology 3 Units

Term Typically Offered: Fall Only

Prerequisite(s): Consent of instructor Basic laboratory techniques in Exercise Physiology will be covered, including: oxygen consumption, strength measurement, body composition, etc.

Fee: An additional \$95.00 is charged for this course.

Description: General concepts of data collection including validity and reliability will be emphasized. Scientific writing skills will be developed through the use of lab reports. Experimental design and analysis will be briefly discussed. Fall.

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EXP 602. Biochemistry of Exercise 3 Units

Term Typically Offered: Spring Only

Prerequisite(s): EXP 600 or consent of instructor.

Description: Examination of nutritional, energetic and metabolic aspects of exercise. Emphasis on various biochemical control mechanisms that function during exercise and biochemical adaptations that occur through exercise training. Spring.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

EXP 603. Seminar in Exercise Physiology 3 Units

Description: Reviews, presentations and discussions of current topics in exercise physiology.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

EXP 604. Advanced Topics in Exercise Physiology 1-3 Units

Prerequisite(s): EXP 600 or consent of instructor.

Description: Independent study under the guidance of a selected faculty member.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

EXP 605. Human Physiology 3 Units

Term Typically Offered: Fall Only

Prerequisite(s): Consent of instructor.

Description: Fundamental mechanisms of human physiology and study of coordinated body functions. Emphasis on neuromuscular, circulatory, respiratory and endocrine systems. Fall.

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EXP 606. Case Study Practicum 3 Units

Prerequisite(s): EXP 501/HPES 486, and EXP 502.

Description: Analysis and critical review of case studies for special population. Exercise prescription, assessment of test results and lifestyle modifications.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

EXP 607. Neuromuscular Exercise Physiology 3 Units

Term Typically Offered: Fall, Spring

Description: This course provides a foundation for the interaction of the nervous system, musculoskeletal system and the control of human movement.

Note: Cross-listed with HSS 500.

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EXP 608. Strength and Conditioning I 3 Units

Description: The course provides some of the content to prepare students for certifications offered by the National Strength and Conditioning Association (Certified Strength and Conditioning Specialist, CSCS), USA weightlifting (Sport Performance Coach), Collegiate Strength and Conditioning Coaches Association (Strength and Conditioning Coach Certified, SCCC), National Academy of Sports Medicine (Performance Enhancement Specialist, PES and Corrective Exercise Specialist, CES), and Functional Movement Systems (Functional Movement Screening, FMS).

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EXP 609. Strength and Conditioning II 3 Units

Prerequisite(s): EXP 608.

Description: This course is designed to optimize more practical programming and coaching opportunities. It is designed to prepare students to develop and implement safe and effective programming for a variety of athletic populations through manipulation of programming variables and periodization strategies. This course, (along with its prereq) provides some of the content to prepare students for certifications offered by the National Strength and Conditioning Association, National Academy of Sports Medicine, and Functional Movement Systems Inc.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

EXP 611. Advanced Cardiorespiratory Physiology with ECG 3 Units

Term Typically Offered: Fall Only

Prerequisite(s): EXP 501, EXP 502 and EXP 605 or consent of instructor.

Description: Course delivers an in-depth examination of the pathophysiology of cardiovascular and pulmonary diseased states during resting conditions and their effects on the exercise response.

The mechanical and electrical properties of the heart are explored through the interpretation of ECG signals including rate, rhythm, axis, hypertrophy and infarction. Myocardial oxygen consumption, pressure-volume loops, arteriovenous oxygen differences, and the effects of cardiac pharmacology are also reviewed.

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EXP 620. Exercise Physiology Internship 3-6 Units

Term Typically Offered: Fall, Spring

Prerequisite(s): EXP 501, EXP 502, EXP 600, EXP 605 or consent of instructor.

Description: Experience in exercise testing, prescription and leadership are available for cardiac rehabilitation, elderly, pulmonary, orthopedic, sports performance, and other special populations as well as healthy individuals.

Course Attribute(s): CBL - This course includes Community-Based Learning (CBL). Students will engage in a community experience or project with an external partner in order to enhance understanding and application of academic content.

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EXP 699. Thesis 1-6 Units

Grading Basis: Pass/Fail

Prerequisite(s): Consent of advisor.

Description: Thesis hours.

Note: Pass/Fail.

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