

# Exercise Physiology (EXPH)

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## **EXPH 1001 Introduction to Exercise Science (1 credits)**

Introduction to the basic principles of exercise physiology. Exposure to the various careers within exercise science. Additional topics of interest include research techniques, certification requirements and professional development.

*Prerequisite:* EXPH major; or cons. of instr.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%201001>)

## **EXPH 1010 Emergency Care, CPR and AED (1 credits)**

Lecture/lab. An overview of principles and techniques of first aid, emergency care and cardiopulmonary resuscitation. Competency in skills leads to American Heart Association Health Care Provider CPR and first aid certification.

*Prerequisite:* EXPH major; or cons. of instr.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%201010>)

## **EXPH 1020 Personal Health and Wellness (1 credits)**

Personal health and wellness and teaches students how to stay healthy across the life span by integrating aspects of wellness such as conscientious dietary decisions, behavioral and functional movement choices. Students develop an understanding of the various components of fitness and wellness in order to help them reach their health and fitness goals.

*Prerequisite:* EXPH major; or cons. of instr.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term, 2022 Spring Term, 2021 Spring Term, 2020 Summer Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%201020>)

## **EXPH 1500 Functional Anatomy of Exercise (1 credits)**

Provides a basic overview of performance enhancement from an anatomical approach. Large muscle groups are reviewed for origin, insertion and actions (open and closed chain) with classic and elite performance demonstrated and students performing the exercises.

*Prerequisite:* EXPH major and BISC 1035, which must be taken concurrently; or cons. of instr.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term, 2022 Summer Term, 2022 Spring Term, 2021 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%201500>)

## **EXPH 2001 Professional Practice (1 credits)**

An introduction to the professional world of exercise physiology for an entry-level wellness leader. Topics covered include: professional practice, communication, social media usage, resume & cover letter writing and interviewing. Focuses on application of leadership and professionalism principles to common wellness environments.

*Prerequisite:* EXPH major and EXPH 3986, which may be taken concurrently; or cons. of instr.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term, 2022 Spring Term, 2021 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%202001>)

## **EXPH 2015 Equity, Diversity and Inclusion in Exercise Physiology (1 credits)**

An introduction to the promotion of equity, diversity and inclusion in the field of wellness. Topics covered include: cultural humility, qualities of an effective exercise leader, conflict resolution, mindfulness and the components of leadership. Focuses on application of leadership and professionalism principles to common wellness environments.

*Prerequisite:* EXPH major and EXPH 2110; or cons. of instr.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%202015>)

## **EXPH 2045 Principles of Human Physiology (3 credits)**

Students develop a fundamental understanding of the physiological processes in the human body. Covers the function of cells, tissues, organs and systems, and the communication, integration, and processes necessary to maintain the body's internal environment within a narrow range (homeostasis) even under extreme conditions. Where appropriate, use of pathophysiological examples to highlight the differences between normal and abnormal function (healthy and unhealthy biological systems). Focuses specifically on developing the student's understanding of the following physiological systems: skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive.

*Prerequisite:* BISC 1035, or BISC 3135, or BISC 2015 and BISC 2016; and CHEM 1002.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2021 Summer Term, 2020 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%202045>)

**EXPH 2046 Principles of Human Physiology Lab (1 credits)**

Laboratory/discussion-based course which provides a detailed study and hands-on experiential learning of the physiologic processes in the human body.

*Prerequisite:* BISC 1035, or BISC 3135, or BISC 2015 and 2016; CHEM 1002; EXPH 2045, which may be taken concurrently.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2020 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%202046>)

**EXPH 2106 Cognitive and Motor Learning (3 credits)**

Lecture/lab. A study of the principles of human motor learning development from infancy through adulthood. Instructional emphasis is given to those factors which have implications for exercise and training. Course fulfills Theory Elective for the EXPH major for students who declared the major Fall 2019 or later.

*Prerequisite:* EXPH major; or cons. of instr.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term, 2022 Spring Term, 2021 Spring Term, 2020 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%202106>)

**EXPH 2110 Kinesiology/Biomechanics (4 credits)**

Lecture/lab. Study of human motion emphasizing skeletal structure. Mechanical principles which influence human exercise are examined. Identification of the origin, insertion and function of major muscles is included along with surface anatomy.

*Prerequisite:* BISC 1035; or BISC 2015 and BISC 2016; and EXPH 1500 which all must be completed with a grade of C or better.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Summer Term, 2022 Fall Term, 2022 Summer Term, 2021 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%202110>)

**EXPH 2115 Exercise Physiology (3 credits)**

Protein, carbohydrate and lipid metabolism in relation to energy production including anaerobic and oxidative pathways with an emphasis on exercise and health. A study of the effects of exercise on the major systems of the human body, including the cardiorespiratory and neuromuscular systems.

*Prerequisite:* BISC 1035 and EXPH 2045; or BISC 2015 and BISC 2016.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term, 2022 Spring Term, 2021 Spring Term, 2019 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%202115>)

**EXPH 2116 Exercise Physiology Laboratory (1 credits)**

Provides an experiential overview of human exercise physiology. Topics include basic laboratory procedures and interpretation, bioenergetics and energy expenditure dynamics, lactate threshold, ergometers and power output, field and stress testing, mechanical efficiency, muscular strength assessment, cardiovascular dynamics, body composition and respiratory dynamics.

*Prerequisite:* BISC 1035, EXPH 2045 and EXPH 2046; or BISC 2015 and BISC 2016.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term, 2022 Spring Term, 2021 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%202116>)

**EXPH 2190 Scientific Principles of Strength and Conditioning (3 credits)**

Research and applications of disciplines such as physiology and biomechanics within context of program design, exercise techniques, strength, power, speed and flexibility development, physical testing, and training adaptations. Lecture/Lab.

*Prerequisite:* BISC 2015 and BISC 2016; or EXPH 2045.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term, 2022 Spring Term, 2021 Spring Term, 2020 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%202190>)

**EXPH 2931 Topics in Exercise Physiology (1-4 credits)**

Selected topics, not a part of the regular course work taught because of a special need, interest, or opportunity.

*Prerequisite:* Jr. stndg. and EXPH major; or cons. of instr.

*Level of Study:* Undergraduate

*Last four terms offered:* 2021 Spring Term, 2020 Fall Term, 2020 Summer Term, 2020 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%202931>)

**EXPH 2931H Honors Topics in Exercise Physiology (1-4 credits)**

Selected topics, not part of the regular course work taught because of a special need, interest or opportunity. As an Honors Program course, includes a more intensive research or project component.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%202931H>)

**EXPH 3000 Applied Elective in Exercise Physiology (1-3 credits)**

Selected applied and studio topics, not a part of the regular course work taught because of a special need, interest or opportunity.; EXPH major; or cons. of instr.

*Prerequisite:* Jr. stndg.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Summer Term, 2023 Spring Term, 2022 Fall Term, 2022 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203000>)

**EXPH 3010 Cardio Dance (1 credits)**

Provides a new method for teaching cardiovascular fitness in a clinical/exercise setting. Utilizing the principles and techniques learned throughout the semester, students are required to develop a cardio dance fitness session. Fulfills the Applied Elective requirement in the EXPH major. and EXPH major

*Prerequisite:* Jr. stndg.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203010>)

**EXPH 3015 CrossFit (2 credits)**

CrossFit is designed as an introductory overview of the CrossFit methodology: the core principles, definitions, prescriptions, primary movement cues/ techniques, dietary protocols and history/current state of the fitness movement. Fulfills the Applied Elective requirement in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

*Last four terms offered:* 2021 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203015>)

**EXPH 3020 Core Stabilization (1 credits)**

Introduces the anatomy and function of the human body core musculature. Learn an evidence based approach to develop an integrated exercise plan to strengthen and stabilize the core. Integrate this knowledge into an appropriate treatment plan for a variety of special populations. Exercise modalities such as the physioball, foam roll, body blade, theraband, and Pilates are learned. Fulfills Applied Elective requirement in the EXPH major. and EXPH major

*Prerequisite:* Jr. stndg.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203020>)

**EXPH 3025 Spinning (1 credits)**

Spinning allows students to learn proper form, technique and exercise movements to be safe and successful while performing and teaching spinning for fitness instruction. Course fulfills the Applied Elective requirement in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203025>)

**EXPH 3035 Linear and Multi-Directional Speed (1 credits)**

Provide instruction on how to assess, instruct, plan and develop programs to enhance linear and multi-directional speed in athletes. Topics include how motor learning principles, perception action coupling and decision making can affect the transfer of drills in the training environment to actual sport situations on the field. Fulfills the Applied Elective requirement in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203035>)

**EXPH 3040 Yoga (1 credits)**

Provides the opportunity to gain a better understanding of the practice and benefits of yoga. Philosophy and history as well as traditional and modern aspects of yoga are covered. Various class styles are presented and explored. Fulfills the Applied Elective requirement in the EXPH major. and EXPH major

*Prerequisite:* Jr. stndg.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203040>)

**EXPH 3050 Latin Dance Aerobics (1 credits)**

An Introduction to basic and advanced Latin dance steps choreographed to appropriate music. Learn proper class format and structure to lead a safe and fun Latin Dance Aerobics class, including non-verbal cues, and appropriate modifications. Fulfills the Applied Elective requirement of the EXPH major. and EXPH major

*Prerequisite:* Jr. stndg.

*Level of Study:* Undergraduate

*Last four terms offered:* 2015 Fall Term, 2015 Spring Term, 2014 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203050>)

**EXPH 3055 BARRE (1 credits)**

Barre is a fitness program that blends the latest Exercise Science methods with the principles of the Lotte Berk Method of Barre delivering a fusion of ballet, pilates, yoga and strength training. Demonstration and return demonstration are the primary method of instruction from a certified Barre instructor. Fulfills the Applied Elective requirement in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

*Last four terms offered:* 2021 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203055>)

**EXPH 3060 Kickboxing F.I.T. (1 credits)**

Learn proper class format, safety, technique and structure to develop and lead safe and effective kickboxing training routines. Fulfills the Applied Elective requirement in the EXPH major. and EXPH major

*Prerequisite:* Jr. stndg.

*Level of Study:* Undergraduate

*Last four terms offered:* 2021 Fall Term, 2015 Fall Term, 2014 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203060>)

**EXPH 3065 Water Aerobics (1 credits)**

Students utilize foundational fitness knowledge and current research to develop and lead water aerobics programs designed to meet a variety of fitness goals of flexibility, endurance and/or strengthening. Through active participation, students also learn to instruct participants on proper technique to be safe and successful while performing and teaching water aerobics. Course fulfills the Applied Elective requirement in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203065>)

**EXPH 3070 Latin Dance Aerobics + Toning (1 credits)**

Introduces basic and advanced Latin dance steps choreographed to appropriate music. Learn proper class format and structure to lead a safe and fun Latin Dance Toning class, including proper cues, exercises and appropriate modifications. Fulfills the Applied Elective requirement in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term, 2022 Spring Term, 2021 Spring Term, 2020 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203070>)

**EXPH 3080 Tai Chi (1 credits)**

Learn the "Fifteen Important Transitions" (F.I.T.) of Tai Chi F.I.T. and adjunct exercises (qigong) for utilization in a variety of clinical settings. Study the principles and practice the postures of Tai Chi F.I.T., along with qigong exercises. Develop and lead safe and effective Tai Chi F.I.T. programs to improve an individual's physical strength, posture and alignment, balance, motor recruitment strategies and proprioception. Fulfills the Applied Elective requirement in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term, 2022 Spring Term, 2021 Spring Term, 2020 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203080>)

**EXPH 3095 ACSM Personal Trainer Certification (2 credits)**

Provides an overview of the ACSM exam for the Certified Personal Trainer (CPT). Prepares students to 1) sit for the ACSM certification exam and 2) practice as a Personal Trainer. Review, teach and reinforce concepts in the various domains of the exam. Opportunities for test taking practice in preparation for the written test and practice the interviewing and physical skills associated with the practice of personal training. Course fulfills the Applied Elective requirement in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203095>)

**EXPH 3170 Administration in Exercise Science (2 credits)**

Study of the strategies and considerations involved in the successful management of a fitness facility. Areas include program planning, budgeting, facility design and organization.

*Prerequisite:* EXPH 3986; EXPH major; or cons. of instr.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203170>)

**EXPH 3180 Exercise Testing and Prescription (3 credits)**

Practical experience in fitness testing/assessment, program design and instruction in a wide variety of fitness related programs. Emphasis on test protocols for evaluating health related components of physical fitness. Lecture/lab.

*Prerequisite:* EXPH 2115; EXPH major; or cons. of instr.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2021 Spring Term, 2020 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203180>)

**EXPH 3200 Clinical Exercise Physiology (3 credits)**

Provides theory and practical experience in clinical exercise physiology. Content includes Electrocardiography, Arrhythmia Recognition, Basic Clinical Assessment, Exercise Testing, Health and Fitness Assessment, Foundations of Clinical Exercise Prescription, and Disease Specific Exercise Recommendations. Students are prepared to sit for certification exams in the American College of Sports Medicine, American Society of Exercise Physiology and National Athletic Trainers' Association.

*Prerequisite:* BISC 1035; or BISC 2015 and BISC 2016; EXPH 2190; and EXPH 3180.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term, 2022 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203200>)

**EXPH 3500 Health Behavior (3 credits)**

Presents health behavior theories and applications from the individual to environmental level that characterize the diverse practice of health behavior change, public health and health promotion. Designed to provide the opportunity to explore, apply and critique the theoretical foundations of health promotion and behavior.

*Prerequisite:* EXPH; PBHE minor; or cons. of instr.

*Level of Study:* Undergraduate

*Marquette Core Curriculum:* NSM Individuals & Communities

*Last four terms offered:* 2023 Spring Term, 2022 Spring Term, 2021 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203500>)

**EXPH 3600 Theoretical Elective in Exercise Physiology (1-3 credits)**

Selected theoretical lecture, lab, discussion and community engaged courses. Not a part of the regular course work taught because of a special need, interest or opportunity.; EXPH major; or cons. of instr.

*Prerequisite:* Jr. stndg.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term, 2022 Fall Term, 2022 Spring Term, 2021 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203600>)

**EXPH 3610 Psychology of Injury Recovery (1 credits)**

Mental strategies are valuable tools athletes and nonathletes need to recover from injury and rebound stronger. Discuss mental skills and psychological tools applicable for healthcare professionals, including athletic trainers and physical therapists. Fulfills the Theory Elective in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203610>)

**EXPH 3615 Introduction to Research in Biomechanics (2 credits)**

Exposes students to a wide variety of biomechanical research methods, that are used to study human movement, through inquiry-based learning projects. In addition, general experiences related to the collection, analysis and presentation of scientific data are emphasized. Fulfills the Theory Elective requirement in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

*Last four terms offered:* 2021 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203615>)

**EXPH 3620 Clinical Exercise Testing (1 credits)**

Introduces formal clinical exercise testing in patients with/without chronic diseases. Provides exposure to a wide variety of physiologic testing modalities and their utility in a variety of clinical situations. As well as exposure to research techniques and grant formation.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203620>)

**EXPH 3625 Exercise is Medicine (2 credits)**

Exercise is Medicine® On Campus is a project-based, service-learning course. Immersion in to the concept of physical activity (PA) as a therapeutic modality to prevent and treat chronic disease and discovery that exercise and PA are a cost-effective intervention. Additionally, learn to appreciate the concept of and implications of health disparities as they relate to exercise, physical activity and health. Students are challenged to think creatively to: 1) produce education materials, 2) develop an e-media informational presentation, 3) host an event themed around EIM and 4) propose a change in policy and/or culture. Marquette University and the surrounding Near West Side neighborhoods are the target communities. Fulfills the Theory Elective in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2022 Spring Term, 2021 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203625>)

**EXPH 3635 Current Issues in Nutrition (1 credits)**

An in-depth examination of contemporary nutrition issues that are currently discussed in scientific circles. The influence of policy and research on the understanding of nutrition and health outcomes. Controversies in nutrition and cultural aspects of food are also covered through weekly discussions. Stndg.; and EXPH 4189, which may be taken concurrently.

*Prerequisite:* EXPH major; Jr.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203635>)

**EXPH 3640 Pediatric Cardiac Rehabilitation (1 credits)**

Provides theory and practical experience in pediatric cardiac rehabilitation. Topics include cardiopulmonary physiology, clinical assessment, exercise testing for diagnosis as well as for programing, foundations of exercise prescription in patients with cardiac diseases, basic pharmacology and a foundation in the categorization and management of children with congenital heart defects. Assists in the preparation of certification exams in the following professional organizations: American College of Sports Medicine (ACSM); American Society of Exercise Physiology (ASEP); National Athletic Trainers' Association (NATA).

*Prerequisite:* EXPH major; EXPH 3180 and EXPH 3200, which may be taken concurrently.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203640>)

**EXPH 3645 Health Science in The News (1 credits)**

Keep up with the ever-changing health science news. Exposes students to a wide range of topics. Weekly coverage of useful skills such as strategies for staying up to date with new information, scrutinizing sources and understanding trade-offs, are determined as they happen (in the news).

*Prerequisite:* EXPH major and Jr. stndg.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203645>)

**EXPH 3650 ACSM Exercise Physiologist Certification (3 credits)**

Provides an overview of the American College of Sports Medicine (ACSM) certification process for the Certified Exercise Physiologist (EP-C). Includes material for the Certified Personal Trainer (CPT) exam. Reviews and reinforces concepts in the various domains of the exam. Topics may include form intake, screening, assessments, programming, marketing, business concepts and behavior modification. Math competency is emphasized. Course fulfills the Theory Elective in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203650>)

**EXPH 3655 Fundamentals of Athletic Training (3 credits)**

Basic concepts of anatomy, mechanisms of injury, and the administration of athletic training will be taught. Students will be able to demonstrate a basic mastery of athletic injuries of all body parts. Students will also obtain basic knowledge of the NATA code of ethics and BOC standards of practice for athletic trainers (ATs). Topics include also general illnesses, conditions, drugs, nutrition, and disabilities providing an overall introductory coverage of sports medicine topics. Included in this course is a field experience within the athletic training room which will provide students the ability to observe the didactic course content in clinical application. of instr

*Prerequisite:* EXPH DRAT major and cons.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203655>)

**EXPH 3660 Becoming a Clinical Exercise Physiologist (1 credits)**

Explores the profession of clinical exercise physiology (CEP) in the hospital setting. Exposes students to the day-to-day requirements of the profession. Concepts include preparation for professional certification; governing bodies and scope of practice (ACSM, AHA, ACC, ASEP); interprofessional education and communication standards; and Interpretation and presentation of critical results. Additionally, students are exposed to clinical scenarios that require patient counseling, education and documentation.

*Prerequisite:* EXPH major, EXPH 2115 and EXPH 3180.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203660>)

**EXPH 3670 Introduction to Analytics in Sports: Using Data to Improve Performance (2 credits)**

Introduction to statistical methodologies used to study and interpret data collected in the physical therapy clinic, exercise performance laboratory or athletic program. Fulfills the Theory Elective in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203670>)

**EXPH 3680 Psychological Aspects of Sport & Exercise (2 credits)**

Designed to present the basic psychological aspects of sport, exercise and rehabilitation. Students demonstrate their knowledge of sport and exercise psychology through a variety of activities emphasizing real-life application in an effort to enhance evidence-based practice in areas including: psychological influences on individual performance including motivation, arousal, stress and anxiety; situational influences on performance including feedback, reinforcement and punishment; group dynamics affecting performance (e.g., cohesion, leadership and communication); performance enhancement through Psychological Skills Training (PST). Fulfills the Theory Elective in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203680>)

**EXPH 3690 Environmental Physiology (2 credits)**

Systems based physiological responses and adaptations to acute and chronic environmental stress. Considerations are given to rest and exercise conditions. Depending on class interest, topics could include spaceflight and microgravity, hyperbaric environments, hypoxia, high altitude, heat, cold, as well as exercise under extreme conditions such as expeditionary climbing. Application to chronic disease is emphasized. Fulfills the Theory Elective in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203690>)

**EXPH 3986 Exercise Physiology Practicum 1 (2 credits)**

Clinical Experience in real-world wellness settings. Experience may include fitness testing, evaluation, exercise prescription, instruction, wellness, community health, leadership or management in different settings. May be dependent on space. Current CPR and First Aid certifications. S/U grade assessment.; EXPH major, EXPH 1010, EXPH 2110, EXPH 2115, EXPH 2190; and EXPH 2001, which may be taken concurrently.

*Prerequisite:* Jr. stndg.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Summer Term, 2023 Spring Term, 2022 Fall Term, 2022 Summer Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%203986>)

**EXPH 4010 Obesity - A Comprehensive Approach (2 credits)**

Explores obesity as a disease process using a multi-focal approach. Students examine mental, physical, and social facets of obesity as well as approaches to treat and prevent it. Application of classroom material will occur via service learning at a variety of sites in MPS and other facilities throughout Milwaukee, WI. Fulfills the Theory Elective in the EXPH major.

*Prerequisite:* Jr. stndg. and EXPH major.

*Level of Study:* Undergraduate

*Last four terms offered:* 2014 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204010>)

**EXPH 4015 Advanced Practice for the Exercise Physiologist (2 credits)**

Knowledge in behavior modification and practice management, along with prior course work, is incorporated for working with individuals in adopting and maintaining healthy lifestyle behaviors. Includes performing pre-exercise health risk assessments, conducting physical fitness assessments and developing exercise prescriptions and programs for individuals with medically-controlled diseases. Fulfills the Applied Elective in the EXPH major.

*Prerequisite:* EXPH major and Sr. stndg.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204015>)

**EXPH 4020 Clinical Case Management in Exercise Science (3 credits)**

Study of the pathophysiology, as well as the patient and society burden of "clinical populations" and the relevant concerns that may require/result in exercise/treatment strategy modifications. The ability of the student to communicate with and advocate for these "clinical populations" is emphasized.

*Prerequisite:* EXPH 2115 with a grade of C or better.

*Level of Study:* Undergraduate

*Marquette Core Curriculum:* Writing Intensive

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204020>)

**EXPH 4187 Clinical Exercise Physiology for Special Populations (3 credits)**

Studies program modifications and techniques for various populations from a system-based approach that includes, but is not limited to, diseases of the cardiovascular, pulmonary, endocrine, neurologic and musculoskeletal systems. May also include exercise prescription throughout the life span, within elite athletes, and in those with psychological disorders. Considers the socioeconomic burden of diseases.

*Prerequisite:* EXPH major and EXPH 2115, EXPH 3180, and EXPH 3200; or cons. of instr.

*Level of Study:* Undergraduate

*Marquette Core Curriculum:* NSM Crossing Boundaries, NSM Individuals & Communities

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204187>)

**EXPH 4189 Nutrition and Exercise Performance (4 credits)**

Studies comprehensive human nutrition. Covers nutrition principles and guidelines with historical and economic context for the evolution of whole to ultra-processed food consumption. Discusses carbohydrate, fat, protein, vitamin and mineral requirements and their role and interrelationships in nutrition and metabolism. Examines dietary assessment, public health and life cycle nutrition as it relates to health and disease. Addresses broader topics regarding food systems and applied issues. Covers the role of nutrition in exercise training and performance, including ergogenic aids and eating disorders.

*Prerequisite:* EXPH 2115.

*Level of Study:* Undergraduate

*Marquette Core Curriculum:* NSM Basic Needs & Justice

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2021 Summer Term, 2020 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204189>)

**EXPH 4190 Advanced Strength & Conditioning (3 credits)**

Covers advanced strength and conditioning topics including: plyometrics, speed and agility development, testing, program design, linear and non-linear periodization and potentiation phenomenon.

*Prerequisite:* EXPH 2115, EXPH 2190 and cons. of instr.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204190>)

**EXPH 4192 Advanced Exercise Physiology (3 credits)**

Advanced course in the study of the body's response to physical activity. Focuses on the critical evaluation of the scientific literature with discussion of the standard techniques utilized in exercise physiology research.; EXPH major; and EXPH 2115, EXPH 3180, BISC 1035 (or BISC 2015 and BISC 2016); EXPH 4195, which must be taken concurrently; or cons. of instr.

*Prerequisite:* Sr. stndg.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204192>)

**EXPH 4195 Advanced Exercise Physiology Laboratory (1 credits)**

Presents advanced techniques used in exercise physiology to study the human body's response and adaptations to exercise. Focuses on laboratory techniques and skills that are standard, but cutting edge in exercise physiology research and form the basis of knowledge in exercise physiology.

Laboratory techniques include those used to study and quantify neuromuscular function, metabolic responses and cardiovascular adjustments to acute and chronic exercise. Students gain practical experience in the scientific process and come to understand and perform these techniques.; EXPH major; and EXPH 2115, EXPH 3180, BISC 1035 (or BISC 2015 and BISC 2016); EXPH 4192, which must be taken concurrently; or cons. of instr.

*Prerequisite:* Sr. stndg.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204195>)

**EXPH 4931 Topics In Exercise Physiology (1-3 credits)**

Selected topics in exercise physiology. Specific topics will be designated in the Schedule of Classes.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204931>)



**EXPH 4956H Honors Introduction to Research in Exercise Physiology (1 credits)**

Introduction to research and application of research under the direction of a faculty adviser. As an Honors Program course, includes a more intensive research or project component.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term, 2021 Spring Term, 2020 Spring Term, 2019 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204956H>)

**EXPH 4957H Honors Advanced Research in Exercise Physiology (1 credits)**

Under the direction of a faculty adviser, students participate in various aspects of the research process which may include literature review, design/proposal, data collection, analysis/interpretation and dissemination of results. As an Honors Program course, includes a more intensive research or project component.

*Prerequisite:* Admission to EXPH Disciplinary Honors Program.

*Level of Study:* Undergraduate

*Last four terms offered:* 2021 Fall Term, 2021 Spring Term, 2019 Fall Term, 2018 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204957H>)

**EXPH 4960H Honors Research Seminar in Exercise Physiology (1 credits)**

Scholarly presentations by visiting faculty and clinicians, resident faculty and graduate students on current topics related to exercise physiology. As an Honors Program course, includes a more intensive research or project component.

*Prerequisite:* Admission to EXPH Disciplinary Honors Program.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Spring Term, 2021 Fall Term, 2021 Spring Term, 2020 Spring Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204960H>)

**EXPH 4986 Exercise Physiology Practicum 2 (6-16 credits)**

Work experience in approved fitness-related agencies. Experience may include fitness testing, evaluation, exercise prescription, instruction. Leadership or management in different settings. May be dependent on space. S/U grade assessment.; Sr. stndg; EXPH major; current CPR and First Aid certifications; and satisfactory completion of all EXPH major course work including EXPH 3986 with a grade of C or better.

*Prerequisite:* Cons. of program dir.

*Level of Study:* Undergraduate

*Marquette Core Curriculum:* Engage Social Systems & Values2

*Last four terms offered:* 2023 Summer Term, 2023 Spring Term, 2022 Fall Term, 2022 Summer Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204986>)

**EXPH 4995 Independent Study in Exercise Physiology (1-4 credits)**

Faculty-supervised, independent study/research of a specific area or topic in Exercise Physiology.

*Prerequisite:* Cons. of instr.

*Level of Study:* Undergraduate

*Last four terms offered:* 2022 Fall Term, 2022 Spring Term, 2021 Spring Term, 2019 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%204995>)

**EXPH 5015 Advanced Practice for the Exercise Physiologist (2 credits)**

Knowledge in behavior modification and practice management, along with prior course work, is incorporated for working with individuals in adopting and maintaining healthy lifestyle behaviors. Includes performing pre-exercise health risk assessments, conducting physical fitness assessments and developing exercise prescriptions and programs for individuals with medically-controlled diseases. Fulfills the Applied Elective in the EXPH major.

*Prerequisite:* Admitted to the graduate EXRS program.

*Level of Study:* Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%205015>)

**EXPH 5187 Clinical Exercise Physiology for Special Populations (3 credits)**

Studies program modifications and techniques for various populations from a system-based approach that includes, but is not limited to, diseases of the cardiovascular, pulmonary, endocrine, neurologic and musculoskeletal systems. May also include exercise prescription throughout the life span, within elite athletes, and in those with psychological disorders. Considers the socioeconomic burden of diseases.

*Prerequisite:* Cons. of dept. ch.

*Level of Study:* Graduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%205187>)

**EXPH 5192 Advanced Exercise Physiology (3 credits)**

Advanced course in the study of the body's response to physical activity. Focuses on the critical evaluation of the scientific literature with discussion of the standard techniques utilized in exercise physiology research.

*Prerequisite:* EXPH 5195, which must be taken concurrently; enrolled in EXRS accelerated degree program; or cons. of instr.

*Level of Study:* Graduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%205192>)

**EXPH 5195 Advanced Exercise Physiology Laboratory (1 credits)**

Presents advanced techniques used in exercise physiology to study the human body's response and adaptations to exercise. Focuses on laboratory techniques and skills that are standard, but cutting edge in exercise physiology research and form the basis of knowledge in exercise physiology. Laboratory techniques include those used to study and quantify neuromuscular function, metabolic responses and cardiovascular adjustments to acute and chronic exercise. Students gain practical experience in the scientific process and come to understand and perform these techniques.

*Prerequisite:* EXPH 5192, which must be taken concurrently; enrolled in EXRS accelerated degree program; or cons. of instr.

*Level of Study:* Graduate

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2020 Fall Term, 2019 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%205195>)

**EXPH 7189 Nutrition and Exercise Performance (4 credits)**

Studies comprehensive human nutrition. Covers nutrition principles and guidelines with historical and economic context for the evolution of whole to ultra-processed food consumption. Discusses carbohydrate, fat, protein, vitamin and mineral requirements and their role and interrelationships in nutrition and metabolism. Examines dietary assessment, public health and life cycle nutrition as it relates to health and disease. Addresses broader topics regarding food systems and applied issues. Covers the role of nutrition in exercise training and performance, including ergogenic aids and eating disorders.

*Prerequisite:* Enrolled in MATR program.

*Level of Study:* Undergraduate

*Marquette Core Curriculum:* NSM Basic Needs & Justice

*Last four terms offered:* 2022 Fall Term, 2021 Fall Term, 2021 Summer Term, 2020 Fall Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%207189>)

**EXPH 9002H Honors Student Study/Research Placeholder in Exercise Physiology (0 credits)**

Used to enroll a honors student who is not enrolled in the term, but is on campus for an educational experience other than academic credit, such as work in a lab or clinic.

*Level of Study:* Undergraduate

*Last four terms offered:* 2023 Summer Term, 2021 Summer Term, 2021 Spring Term, 2019 Summer Term

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=EXPH%209002H>)