**UNIV*6000  The Structure and Function of Muscle  Unspecified [0.50]**

An interdisciplinary course covering basic aspects of muscle from a range of viewpoints: structure, metabolism, protein content, energetics, mechanics, biological adaptations, growth and development. The course is designed for graduate students from a wide range of specific disciplines and will provide a broad background to muscle biology as well as more detailed insights into specific aspects of each area covered.

**Department(s):** Department of Human Health and Nutritional Sciences  
**Location(s):** Guelph

**UNIV*6010  Regulation in Muscle Metabolism  Unspecified [0.50]**

An interdisciplinary course emphasizing the regulation of muscle metabolism in vivo. The course focuses on the integration of metabolic fuel utilization to meet cellular energy demands under a variety of conditions in the whole animal. Topics include: sources of energy demand, integration of energy supply to meet energy demands, and regulation of cell growth, maintenance and adaptation.

**Department(s):** Department of Human Health and Nutritional Sciences  
**Location(s):** Guelph

**UNIV*6020  Experimental Design and Applied Data Analysis for the Agricultural Sciences  Fall and Winter Reg Required [0.50]**

This course focuses on statistical principles, experimental designs, and communication of findings to research peers within the agricultural field. Students apply statistical techniques and perform data analyses.

**Location(s):** Guelph

**UNIV*6030  Seminars and Analysis in Animal Behaviour and Welfare  Fall and Winter Reg Required [0.50]**

This seminar-based course offers an interdisciplinary forum for the discussion of broad topics in animal welfare and human-animal relationships. Students analyze topics presented by visiting guest lecturers using perspectives from various disciplines such animal science, philosophy, history, psychology, ethics, and biology.

**Department(s):** Department of Animal Biosciences  
**Location(s):** Guelph

**UNIV*6050  Innovation and Entrepreneurship in Agri-Food Systems  Fall and Winter Reg Required [1.00]**

This course is designed for students in the OMAFRA/UoG HQP Scholarship program, scholars from the Arrell Food Institute, and scholars from Food from Thought, and, space permitting, is open to any graduate student working on a thesis topic related to agri-food. Students work in groups to collaborate with NGOs, government agencies, or businesses on agri-food projects. Through these projects and a series of modules, students build knowledge and competencies in business development, communication, social innovation, project management, and entrepreneurship. This course is limited to 36 students. Priority to HQP Scholarship Program students, Arrell Scholars, and Food from Thought funded graduate students.

**Department(s):** School of Hospitality, Food and Tourism Management  
**Location(s):** Guelph

**UNIV*6060  Mechanisms of Tissue and Cellular Mechanotransduction in Health and Disease  Fall Only [0.50]**

This course explores fundamental mechanisms and signalling pathways that dynamically regulate cell and tissue responses to physical forces in health and disease. It is relevant to a wide range of areas of study, from biomechanics and tissue engineering to gastro-intestinal health, food and nutrition.

**Restriction(s):** Instructor consent required.  
**Department(s):** Department of Food Science  
**Location(s):** Guelph

**UNIV*6070  Topics and Analysis in Sustainability  Unspecified [0.50]**

This course will allow students to examine, analyze and discuss the evolving concept of "sustainability" in a transdisciplinary context and build upon their knowledge and experience in this area. We will examine various current issues that require a global understanding (e.g., climate change, natural resource management, environmental governance) and explore the intersection of business, society and the environment using multi-disciplinary frameworks and perspectives.

**Restriction(s):** Instructor consent required.  
**Department(s):** Dean’s Office, Gordon S. Lang School of Business and Economics  
**Location(s):** Guelph

**UNIV*6080  Computational Thinking for Artificial Intelligence  Unspecified [0.25]**

This course will provide students with an overview of the mathematical and computational foundation that is required to undertake artificial intelligence and machine learning research. Students will also gain an understanding of the historical context, breadth, and current state of the field. Students are expected to have already taken undergraduate courses in probability & statistics, calculus, linear algebra, and data structures & algorithms (STAT*2120, MATH*1210, ENGG*1500, and CIS*2520, or equivalents).

**Offering(s):** Offered through Distance Education format only.  
**Department(s):** Dean’s Office, College of Engineering and Physical Sciences  
**Location(s):** Guelph

**UNIV*6090  Artificial Intelligence Applications and Society  Unspecified [0.50]**

This multidisciplinary, team-taught course provides an in-depth study of how artificial intelligence methodologies can be applied to solve real-world problems in different fields. Students will work in groups to propose solutions whilst considering social and ethical implications of artificial intelligence technologies.

**Prerequisite(s):** UNIV*6080  
**Restriction(s):** Restricted to students in the collaborative specialization in Artificial Intelligence  
**Department(s):** Dean’s Office, College of Engineering and Physical Sciences  
**Location(s):** Guelph

**UNIV*6200  Special Student Research  Unspecified [0.25]**

**Location(s):** Guelph

**UNIV*6500  International Study Option  Unspecified [0.00]**

A period of study in another country as part of a graduate program at the University of Guelph. Details may be obtained from the Office of Graduate and Postdoctoral Studies.

**Department(s):** Office of Graduate Studies  
**Location(s):** Guelph
UNIV*6600 Animal Care Short Course Summer, Fall, and Winter [0.00]
The course includes on-line training modules covering the following topics: Legislation, Regulation & Guidelines, Ethological Considerations in Animal Management, Ethics in Animal Experimentation, Research Issues, The Three Rs of Humane Animal Experimentation, Occupational Health and Safety when Working with Animals, Euthanasia, Recognition and Alleviation of Pain and Distress in Animals. Graduate students using or caring for live animals or assisting in teaching courses involving live vertebrate animals also must attend the Animal Care Services species-specific Workshops as part of the Animal User Training Program.
Department(s): Office of Graduate Studies
Location(s): Guelph

UNIV*6710 Commercialization of Innovation Fall Only [0.50]
This course is designed to help participants better understand the process, the analytical tools that can assist the process and how best to prepare technologies to survive commercialization. The course includes elements of entrepreneurship, relationship building, organizational change, as well as project and personnel management.
Department(s): Department of Management
Location(s): Guelph

UNIV*6800 University Teaching: Theory and Practice Fall Only [0.50]
Participants will critically examine aspects of teaching in higher education and develop teaching skills such as lecturing, demonstrating, leading discussions, and problem solving. Satisfactory (SAT) or unsatisfactory (UNS) will be used to evaluate the student’s performance in this course.
Department(s): TSS Instructional Development
Location(s): Guelph

UNIV*6900 Special Topics Unspecified [0.50]
This special topics course explores selected themes, topics, and/or applied practices that are not covered by existing courses and do not have a natural disciplinary home. Any unit may request an offering through the Office of Graduate and Postdoctoral Studies.
Department(s): Office of Graduate Studies
Location(s): Guelph

UNIV*7000 Qualifying Examination Unspecified [0.00]
Doctoral students are required to pass an examination to assess their knowledge of the subject area and related fields. Upon completing it satisfactorily, the student is deemed to have met the departmental standards and becomes a candidate for the PhD degree. Students are not responsible for registering in UNIV*7000; the Office of Graduate and Postdoctoral Studies records students as having passed or failed UNIV*7000 upon receipt of the qualifying examination report.
Department(s): Office of Graduate Studies
Location(s): Guelph

UNIV*7010 Qualifying Examination (Second Attempt) Unspecified [0.00]
Doctoral students who fail the Qualifying Examination may be given a second opportunity to pass the examination. This opportunity to repeat it will be no later than six months after the failed attempt. Upon completing it satisfactorily, the student is deemed to have met the departmental standards and becomes a candidate for the PhD degree. Students are not responsible for registering in UNIV*7010; the Office of Graduate and Postdoctoral Studies records students as having passed or failed UNIV*7010 upon receipt of the qualifying examination report.
Department(s): Office of Graduate Studies
Location(s): Guelph

UNIV*7100 Academic Integrity for Graduate Students Summer, Fall, and Winter [0.00]
Academic integrity is a code of ethics for teachers, students, researchers, and writers. It is fundamental to the University of Guelph’s educational mission and to ensuring the value of the scholarly work conducted here. This course provides definitions, examples, and exercises to help graduate students understand the importance of academic integrity and learn how to avoid academic misconduct in their own work. All graduate students must take this course and complete it within 20 days of commencing their graduate program. Students are not responsible for registering in this course; the Office of Graduate and Postdoctoral Studies will enroll students in their first semester in the graduate program.
Department(s): Office of Graduate Studies
Location(s): Guelph

UNIV*7500 Research/Writing Unspecified [0.00]
This course code signifies ongoing research and writing activities related to the completion of graduate degree programs. Students register for UNIV*7500 in each semester that they are working towards their master’s or doctoral thesis and/or are not taking any other courses for which an active section exists.
Department(s): Office of Graduate Studies
Location(s): Guelph