EXERSCI 305
Movement Neuroscience
(15 points)
(Semester 1, Grafton & Newmarket Campuses)

Prerequisites:
15 points from EXERSCI 201, MEDSCI 206, 309, 320, PSYCH 202, SPORTSCI 201

Who should take this course?
- All BSc Majors in Exercise Sciences (ES) or Sport and Exercise Science (SES)
- Any BSc Majors interested in Neuroscience

Learning Outcomes
By the end of this course, students will be able to:
• Describe and explain the degrees of freedom problem as it pertains to the control of movement.
• Identify, explain and evaluate the main elements of the central and peripheral nervous system dedicated to controlling movement along with their strengths and limitations.
• Identify and critically evaluate the various sources of sensory information that are used to control movement and posture and how they are integrated within the CNS.
• Be able to identify and explain the most common neurological symptoms that affect movement, their neural origin and the rehabilitation approaches that address them.
• Identify and critically evaluate the prevailing theories about how movements are controlled.
• Describe and explain neural plasticity and the levels within the CNS which it occurs to acquire motor skills or recover from neurological disease or injury.

Learning and Teaching
Over the semester students are to attend 12 seminars (Grafton Campus) and 5 three-hour laboratory sessions (Newmarket Campus).

Teaching Staff
Professor Winston Byblow
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Assessment*
Lab Reports  25%
Mid-Semester Exam 25%
In Class Quizzes 10%
Final Exam  40%
*subject to change

Recommended Textbooks
All reading and study material is made available online via CANVAS.

Student Feedback
In 2019 >90% of students indicated:
- The course content was well organised
- The aims of this course were clear to me
- The resources (including digital resources) in this course helped me to learn
- The course was intellectually stimulating

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