EXERSCI 303
Biomechanics 2
(15 points)
(Semester 2, City & Newmarket Campuses)

Prerequisite: 15 points from ENGGEN 121, physics 160, EXERSCI 203 or SPORTSCI 203

Who should take this course?
The purpose of this paper is to advance the student's knowledge and practical expertise in the area of biomechanics, specifically in the area of quantitative movement analysis. The paper consists of both a lecture and compulsory laboratory component. An application area such as occupational ergonomics or clinical gait analysis will be used to demonstrate the biomechanical techniques.

Learning Outcomes
At the completion of this course, a student would be expected to:

- Collect and analyse biomechanical data using video cameras, force sensors and electromyography.
- Critically evaluate kinematic methods to quantify human movements.
- Perform a multi-segment 2D inverse dynamics solution of a simple movement.
- Apply signal processing techniques to reduce noise of collected data.
- Apply biomechanics knowledge in ergonomic, sports, and clinical scenarios.

Learning and Teaching
Students are expected to attend 2 lectures and one 3 hour laboratory/tutorial session per week.

The laboratory sessions are held in the Exercise Sciences’ Teaching Lab: 907-240 at the Newmarket Campus focus on demonstrating the practical implementation of theoretical concepts covered in the course.

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Assessment*
Laboratory Reports
Weekly Quizzes
Assignment
Final Exam

*Subject to change
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