EXERSCI 303  Biomechanics 2  
(15 points)  
(Semester 2, City Campus)  
Prerequisite: EXERSCI 203 or SPORTSCI 203

Who should take this course?  
This course focuses on advanced quantitative techniques in Biomechanics used to study human movement including mathematical modelling and signal processing. An application area such as occupational ergonomics or clinical gait analysis will be used to demonstrate the biomechanical techniques. EXERSCI 303 is a mandatory course in the Exercise Sciences (formerly Sport and Exercise Science) programme.

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

- Demonstrate understanding of the issues involved in collecting, analysing and interpreting biomechanical data  
- Quantify human movement using a variety of kinematic and kinetic methods  
- Perform a multi-segment 2D inverse dynamics solution of a simple movement

Learning and Teaching  
EXERSCI or SPORTSCI 203 is a prerequisite course and theoretical concepts will build upon the knowledge base in that course. Students are expected to attend 2 lectures and one 3 hour laboratory/tutorial session per week.

The laboratory sessions focus on demonstrating the practical implementation of theoretical concepts covered in the course.

Teaching Staff  
Dr Yanxin Zhang  
Senior Lecturer in Biomechanics  
Department of Exercise Sciences  
Faculty of Science  
373 7599 ext 86859  
yanxin.zhang@auckland.ac.nz
<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Reports</td>
<td>25%</td>
</tr>
<tr>
<td>Weekly Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Assignment</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>45%</td>
</tr>
</tbody>
</table>

*Subject to change*