

## Liverpool John Moores University

Title: GAIT ANALYSIS  
Status: Definitive  
Code: **7027SPOSCI** (114336)  
Version Start Date: 01-08-2011

Owning School/Faculty: Sports Sciences  
Teaching School/Faculty: Sports Sciences

Team	Leader
Gabor Barton	Y

**Academic Level:** FHEQ7  
**Credit Value:** 20.00  
**Total Delivered Hours:** 24.00  
**Total Learning Hours:** 200  
**Private Study:** 176

### Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	12.000
Practical	12.000

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Presentation	AS2	Case presentation and oral defence	50.0	
Essay	AS1	Essay (1500 words)	50.0	

### Aims

*To provide a conceptual and practical knowledge base that develops and extends the students' understanding of the principles underpinning movement analysis in an exercise context, as well as using the latest methodologies to conduct case studies through which they are guided through the process of evidence based decision making.*

## Learning Outcomes

After completing the module the student should be able to:

- 1 Analyse and integrate the advanced concepts related to the methodology of gait analysis.
- 2 Interpret the results of a biomechanical sports injury assessment subsequent to conducting gait laboratory based experiments.
- 3 Critically appraise the current literature in the methodological and applied aspects of gait analysis in an exercise context.

## Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

presentation and oral defence 1500 words	1	2
	3	

## Outline Syllabus

- 1 *An introduction to gait analysis*
- 2 *The theory and practice of kinematics, kinetics, EMG and energy consumption*
- 3 *Normal and pathological gait*
- 4 *Conservative and surgical intervention for gait modification*
- 5 *Selected sports injuries case presentations*
- 6 *Performing a sports injury assessment under supervision*

## Learning Activities

Attend lectures and demonstrations including visiting lecture presentations, complete prescribed reading, experimental laboratory assignments and coursework tasks.

## References

<b>Course Material</b>	Book
<b>Author</b>	Kirtley, C.
<b>Publishing Year</b>	2006
<b>Title</b>	Clinical gait analysis, theory and practice
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	Edinburgh: Elsevier.
<b>ISBN</b>	ISBN 0443100098

<b>Course Material</b>	Book
<b>Author</b>	Gage, J.R.

<b>Publishing Year</b>	2004
<b>Title</b>	The treatment of gait problems in cerebral palsy
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	London: Mac Keith
<b>ISBN</b>	ISBN 1898683379

<b>Course Material</b>	Book
<b>Author</b>	Perry, J.
<b>Publishing Year</b>	1992
<b>Title</b>	Gait Analysis
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	Slack Inc.
<b>ISBN</b>	

<b>Course Material</b>	Book
<b>Author</b>	Craik, R.L., Oatis, C.A.
<b>Publishing Year</b>	1994
<b>Title</b>	Human Motion Analysis: Current Applications and Future Directions
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	IEEE Press
<b>ISBN</b>	

<b>Course Material</b>	Book
<b>Author</b>	Kirtley, C.
<b>Publishing Year</b>	0
<b>Title</b>	Clinical Gait Analysis website
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	www.univie.ac.at/cga
<b>ISBN</b>	

<b>Course Material</b>	Book
<b>Author</b>	Gait and Posture, Human Movement Science, Journal of Biomechanics
<b>Publishing Year</b>	0
<b>Title</b>	
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	
<b>ISBN</b>	

<b>Course Material</b>	Book
<b>Author</b>	Clinical Biomechanics, J Electromyography and

	Kinesiology, Journal of Paediatric Orthopaedics
<b>Publishing Year</b>	0
<b>Title</b>	
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	
<b>ISBN</b>	

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### **Notes**

This module provides an opportunity to focus onto the principles underpinning movement analysis in an exercise context. Students have an opportunity to conduct case analyses in sports injuries. Aspects of the advanced methodology and the clinical decision making process will be visited.