

REHA 2005 PATHOMECHANICS AND PODIATRIC MEDICINE

Credit Points 10

Legacy Code 401181

Coordinator Sean Sadler ([https://directory.westernsydney.edu.au/search/name/Sean Sadler/](https://directory.westernsydney.edu.au/search/name/Sean%20Sadler/))

Description This subject will introduce students to clinical/practical and theoretical foundations of human biomechanics of the foot and lower extremity, and the assessment, diagnosis and treatment of common foot and lower extremity pathologies. The subject consists of co-ordinated lectures and practical components to cover the theory and application of foot and lower extremity biomechanics and gait analysis, relevant physical examinations (bones, joints, soft tissues), diagnosing common foot and lower extremity conditions and related treatment options.

School Health Sciences

Discipline Podiatry

Student Contribution Band HECS Band 2 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 2 subject

Pre-requisite(s) NATS 1022 AND REHA 1003

Co-requisite(s) HLTH 2003

Incompatible Subjects REHA 3031 - Podiatric Techniques 1A

Restrictions The subject is Podiatry specific and restricted only to students enrolled in programs 4708 Bachelor of Podiatric Medicine and 4709 Bachelor of Podiatric Medicine (Honours).

Assumed Knowledge

Completion of all core subjects to this semester/ year of study is assumed knowledge

Anatomy is particularly important for the successful completion of this subject. An understanding of the structure and function of the lower extremity is needed as the focus of this subject is on pathologies of the foot and lower extremity and subsequent assessment, diagnosis and management.

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Discuss lower extremity biomechanics in relation to joint structure and function, structural and functional abnormalities, and muscle interaction in static and dynamic environments.
2. Apply relevant skills required for assessment of bones, joints, and soft tissues.
3. Develop and apply an understanding of the gait cycle including joint movement, muscle involvement, and structural linkage.
4. Determine how to assess the gait cycle through visual analysis and instrumented analysis.

5. Exhibit theoretical and practical knowledge of the aetiology, pathology, and clinical presentation of common pathologies of the foot and lower extremity.
6. Review and demonstrate the evidence-based approach for implementing management strategies for common foot and lower extremity pathologies.
7. Discuss and implement the theories of measuring health outcomes.

Subject Content

1. Biomechanics of the lower extremity

- Anatomy of The Lower extremity
 - planes and axis of Motion
 - gait analysis ? static and dynamic joint position and muscle activation
 - introduction to other gait analysis modalities such as pedar, Force plate data collection and software Analyses
 - comparison of walking and running patterns
- ### 2. Assessment of structural and functional abnormalities
- clinical evaluation of bones, joints and soft Tissues
 - introduction to Basic Examination of The hip, knee, leg, ankle and foot

- intrinsic foot abnormalities ? includes forefoot and rearfoot positions and their effects on function and consequent foot changes
 - extrinsic foot abnormalities ? includes Lower limb changes, leg length differences and their effects on function and consequent foot changes
 - Review of health outcomes to asses and Monitor The impact and Progress of Musculoskeletal pathology
- ### 3. Management for osseous, synovial and soft tissue pathologies
- physiological theories of pain and pain management strategies
 - Nerve entrapments
 - Osseous and synovial pathologies such as fractures, digital deformities, Coalitions
 - soft tissue pathologies such as plantar fasciitis, muscle pathology, tendon pathology
 - principles for mechanical treatment ? Indications, contraindications, practical use of orthoses, footwear and electrophysical therapies
 - introduction to footwear mechanics and modifications

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task
Practical Exam	up to 45 minutes	40	N	Individual
Intra-session Exam	60 minutes	30	N	Individual
Intra-session Exam	60 minutes	30	N	Individual
Professional Task	Attendance and participation at scheduled practical sessions throughout semester	S/U	Y	Individual

Teaching Periods

1st Half (2024)

Campbelltown

On-site

Subject Contact Sean Sadler ([https://directory.westernsydney.edu.au/search/name/Sean Sadler/](https://directory.westernsydney.edu.au/search/name/Sean%20Sadler/))

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=REHA2005_24-1H_CA_1#subjects)