

# REHA 4021 THE HIGH RISK FOOT

**Credit Points** 10

**Legacy Code** 401184

**Coordinator** Viv Chuter ([https://directory.westernsydney.edu.au/search/name/Viv Chuter/](https://directory.westernsydney.edu.au/search/name/Viv%20Chuter/))

**Description** The subject builds on fundamentals of pathophysiology and podiatry specific subjects to understand and manage the impact of systemic disease on foot health. The subject specifically investigates pathology associated with the 'high risk foot' including lower extremity manifestations associated with vascular, endocrine, neurological pathology and immunosuppression. This subject aims to develop comprehensive, coherent and connected knowledge to assist making informed decisions and contribute to sustainable change and improvements in health care for people with systemic disease, with particularly emphasis on diabetes and wound management.

**School** Health Sciences

**Discipline** Podiatry

**Student Contribution Band** HECS Band 2 10cp

Check your HECS Band contribution amount via the Fees ([https://www.westernsydney.edu.au/currentstudents/current\\_students/fees/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

**Level** Undergraduate Level 4 subject

**Pre-requisite(s)** REHA 2003 AND  
REHA 2007 AND  
NATS 2038

**Co-requisite(s)** REHA 3028

**Incompatible Subjects** REHA 7026 - Podiatric Techniques 3C

**Restrictions** Students must be enrolled in 4708 Bachelor of Podiatric Medicine and 4709 Bachelor of Podiatric Medicine (Honours). This subject builds on previous podiatry specific clinical and theory subjects

## Assumed Knowledge

All core subjects are assumed knowledge - 400868 Human Anatomy and Physiology 1, 400869 Human Anatomy and Physiology 2, 300574 Neuroanatomy, 400981 Clinical Pharmacology, 400138 Pathophysiology 1.

## Learning Outcomes

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

1. Critique the anatomical, physiological and pathophysiological differences of the arterial, venous, lymphatic and microvascular systems and discern between the diseases of these systems and their consequences in the lower extremity.
2. Execute a thorough examination of the lower extremity vasculature, diagnose vascular status, recognise limitations of these examinations during interpretation of results and instigate an appropriate management plan.
3. Appraise the structure and function of specific functional units of the nervous system, demonstrate knowledge of a range of neurological and neuromotor disorders and explore treatment options available with an emphasis on the role of the podiatrist in the interdisciplinary health care team.

4. Describe the physiological mechanisms of wound healing, in the presence or absence of normal physiological response and thorough examination and investigations and ascertain the underlying causes of the wound, and generate and implement appropriate strategies to return the tissues to their most functional levels by addressing both the wound and the underlying causes.
5. Discuss the physiological basis of the clinical manifestations of diabetes mellitus as it affects multiple organ and functional systems by performing appropriate examinations (vascular, neurological, musculoskeletal, dermatological and psychosocial).
6. Diagnose, evaluate and treat the foot conditions presented by the person with diabetes mellitus, in particular dermal ulcers and explain the role of physical therapies, particularly footwear and orthotic therapy in the ongoing patient management, and health education and promotion strategies.
7. Define a range of conditions associated with impaired carbohydrate metabolism, including gestational diabetes, and impaired glucose tolerance; and be familiar with the syndrome Diabetes Insipidus for purposes of client education and communication with the allied health team.
8. Appraise the common causes of immunosuppression affecting the at-risk foot and generate a comprehensive knowledge and understanding of those infectious diseases which are of particular importance in the practice of podiatry.
9. Evaluate possible routes of transmission of infectious diseases with particular emphasis on cross infection and discuss and implement universal precautions in clinical practice settings.
10. Determine the impact of infectious disease on the physical, emotional and psychological wellbeing of the individual.

## Subject Content

### 1. Vascular Pathologies and Wound Healing

#### a). Arterial pathology

- Review of normal arterial structure and function
- Aetiological and Risk Factors in The development of macrovascular disease
- pathophysiology of Inflammatory and sclerotic changes of macrovascular disease
- clinical manifestations and health outcomes of macrovascular pathology in The leg
- assessment concepts and skills in The identification of macrovascular disease
- limitations in The assessment and interpretation of instrumental macrovascular assessment
- treatment of macrovascular disease, Conservative, pharmaceutical, and surgical
- podiatric case management of The patient with macrovascular disease
- pathophysiology of microvascular disease and dysfunction

#### b). Venous pathology

- Review of normal structure, function and haemodynamics of The Venous system
- Venous hypertensive syndromes through stasis and obstruction in The Venous system
- consequences of deep Venous hypertension (oedematous syndromes, ulceration, dermatitis and superficial varicosities)
- management of obstructive conditions and deep Venous hypertension (Conservative, pharmaceutical and surgical)
- management of The consequences of deep Venous hypertension, with particular references to ulcerative States

### 2. Neurology

- Review of The Anatomy of The neurological structure, motor and Sensory tracts and neurotransmitters

- Overview of The assessment of clinical and medical conditions in relation to The Upper and Lower motor neurone disorders and presentations
- Overview of neurological conditions affecting The Lower limb including
  - adulthood (hereditary, Freidrichss ataxia, Huntingtons)
  - Trauma (CVA /TIA, head injury, tumours)
  - management of neurological conditions in patients with diabetes
  - Infective (Meningitis)
  - Poliomyelitis (Acute and Old), Syphilis (Tabes Dorsalis)
  - Degenerative (Parkinsonism, multiple Sclerosis, motor neurone disease, Alzheimers)
  - Neuromuscular (Myasthenia Gravis, Muscular dystrophies, Epilepsy grand mal, petit mal, focal / Jacksonian epilepsy, Nutritional, Sub-acute combined degeneration of the cord)

### 3. Wound healing

- Review The physiology of Wound healing in normal and pathologic States
  - Inflammation and The Wound microenvironment
  - Diagnosis of wounds according to multifactorial aetiologies
  - identifying, and controlling Factors which are detrimental to Wound healing (optimising The Wound healing environment)
  - Wound debriding agents, cleansing agents and dressings - The range including Factors in The choice and application of Wound care products
  - case management of Wound pathology

### 4. Diabetes

- Defining diabetes mellitus - Aetiological Factors and The signs and Symptoms in The development of diabetes
- The physiology of carbohydrate metabolism, with particular emphasis on The role of insulin and The Classification of conditions associated with impaired glucose metabolism and The role of advanced glycaemic end products (Age) in The Complications of diabetes mellitus
- Diagnosing The condition, Examination of The vascular and Nervous systems with An emphasis on The peripheral Nervous system and diagnostic skills including investigative procedures and clinical urinalysis
- Complications of diabetes
  - a). Morbidity and mortality in diabetes mellitus
    - macrovascular pathology and microvascular dysfunction in diabetes, neurological pathology, including Neuropathic arthropathy, pathological changes to The Inflammatory response, ulceration, infection and gangrene in The diabetic patient
  - b). Treatment
    - controlling blood sugars in diabetes, insulin, oral hypoglycaemia agents, diet, lifestyle and Exercise
    - diabetic emergencies - identification and treatment of hypo and hyperglycaemia
    - Podiatric treatment of the patient with diabetes - modifications and precautions during routine primary care management of ulcerations, infections and gangrene, orthotic therapy and footwear modification
    - principles of health education and promotion - The role of The podiatrist, and strategies for functioning within A multidisciplinary health care team
  - c). Other diabetic st

## Special Requirements

Legislative pre-requisites

### Special Requirements - NSW Health Legislative Prerequisites Pre-requisites

#### Student Compliance Information for all Health-Related Placements

**Prior to enrolling in this subject, students must have submitted a Student Undertaking Form and undertake to apply for a National Police Check, which is required to be submitted before placement, and a**

### Working with Children Check Student Declaration. Use the link to the Special Requirements webpage below for more information.

To be eligible to enrol in this subject and complete any required health-related placements or experiences, students must meet Western Sydney University program requirements as well as any special, legislated, or policy-mandated requirements.

## Western Program Requirements

Visit the Special Requirements webpage for details about your program.

Special Requirements ([https://www.westernsydney.edu.au/currentstudents/current\\_students/enrolment/special\\_requirements/](https://www.westernsydney.edu.au/currentstudents/current_students/enrolment/special_requirements/))

### Mandatory NSW Health student placement policy requirements

To be able to undertake placement in any NSW Health facility you must be assessed as compliant with NSW Health student placement policy in the first year of your program, regardless of when you expect to go on your first placement. Access and read the NSW Student Compliance Information Booklet.

NSW Student Compliance Information Booklet ([https://issuu.com/uwspublications/docs/wsu\\_student\\_compliance\\_booklet\\_2020\\_v6/](https://issuu.com/uwspublications/docs/wsu_student_compliance_booklet_2020_v6/))

Please ensure that you

1. Find your existing National Police Check or apply for one
2. Gather documentary evidence of your vaccination history
3. Print and complete all relevant NSW Health forms relevant to the campus you are enrolled at or online enrolment requirements
4. Follow booklet instructions on how to have your compliance documents assessed by NSW health staff.

International students have additional requirements; the link to the booklet will inform you of these requirements.

### School Requirements

Contact your School for further details regarding your School's requirements, if any, such as

- If you live outside of NSW or Australia and need to meet your state, territory or country's compliance requirements
- If you need to meet different state, territory or country compliance requirements.
- NSW Working with Children Check (WWCC) or other state equivalent, valid for your entire program.
- Current approved first aid certificate valid for your entire program - approved program providers can be found at the Government Training website
- <http://training.gov.au> (<http://training.gov.au>)
- Other non-health related requirements.

Student Compliance Resources are also available on the Placements Hub web page (NSW students only)

[https://www.westernsydney.edu.au/learning\\_futures/home/placements\\_hub/placements\\_hub/student\\_compliance](https://www.westernsydney.edu.au/learning_futures/home/placements_hub/placements_hub/student_compliance) ([https://www.westernsydney.edu.au/learning\\_futures/home/placements\\_hub/placements\\_hub/student\\_compliance/](https://www.westernsydney.edu.au/learning_futures/home/placements_hub/placements_hub/student_compliance/))

## 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
Viva Voce	15 minutes	50	N	Individual
Intra-session Exam	60 mins	20	N	Individual
Case Study	Poster style presentation using designated template	30	N	Individual
Professional Placement Performance	Duration 4 hours	S/U	Y	Individual

Teaching Periods

## 1st Half (2022)

### Campbelltown

#### Day

**Subject Contact** Zainab Al-Modhefer ([https://directory.westernsydney.edu.au/search/name/Zainab Al-Modhefer/](https://directory.westernsydney.edu.au/search/name/Zainab%20Al-Modhefer/))

View timetable ([https://classregistration.westernsydney.edu.au/even/timetable/?subject\\_code=REHA4021\\_22-1H\\_CA\\_D#subjects](https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=REHA4021_22-1H_CA_D#subjects))

## 1st Half (2023)

### Campbelltown

#### On-site

**Subject Contact** Viv Chuter ([https://directory.westernsydney.edu.au/search/name/Viv Chuter/](https://directory.westernsydney.edu.au/search/name/Viv%20Chuter/))

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=REHA4021\\_23-1H\\_CA\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=REHA4021_23-1H_CA_1#subjects))