

NATS 2038

PATHOPHYSIOLOGY 1

Credit Points 10

Legacy Code 401407

Coordinator Zoran Pletikosa (<https://directory.westernsydney.edu.au/search/name/Zoran Pletikosa/>)

Description This subject is intended for students enrolled in Health and Medical Science courses and is designed to equip students with a detailed knowledge of pathophysiological processes evident in a number of key human diseases that are vocationally relevant to these students. The content is organised using a systems-based approach. Problem-based learning methods will be adopted in the tutorial component of this subject to help students develop crucial problem-solving skills.

School Science

Discipline Medical Science

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 1010 - Human Anatomy and Physiology 2

Restrictions

Successful completion of 60 credit points

Learning Outcomes

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

1. explain pathophysiological processes underlying disease
2. apply knowledge of pathophysiological concepts to a range of case studies
3. identify and discuss pathophysiological manifestations of disease states
4. apply problem solving skills in the analysis of case studies
5. relate clinical and laboratory diagnostic findings to pathophysiological processes
6. hypothesise likely outcomes of disease processes
7. explain the basis for common therapeutic interventions

Subject Content

1. Cardiovascular System

- Atherosclerosis and ischaemic heart disease
- Diseases of endocardium, myocardium and pericardium
- Heart valves dysfunctions
- Heart failure
- Hypertension
- Diseases of arteries
- Diseases of veins
- Circulatory derangements: congestion, hyperaemia, oedema
- Haemorrhage
- Shock

2. Respiratory System

- Obstructive lung disorders: asthma, COPD, bronchiectasis
- Restrictive lung disorders
- Cystic fibrosis

- Common respiratory infections
- Pneumonias
- Tuberculosis
- Pulmonary embolism
- Respiratory failure and oxygen therapy
- Diseases of pleura: pleuritis and pneumothorax
- Lung cancer
- 3. Neurological System
- Brain trauma
- Spinal cord injury
- Seizures
- Cerebrovascular accident
- Dementia syndromes
- Demyelinating CNS diseases
- Cerebral palsy
- Degenerative brain diseases
- 4. Musculoskeletal System
- Inflammatory joint disorders
- Degenerative joint disorders
- Metabolic disorders of bones and joints
- Bone fractures
- Musculoskeletal injuries
- Low back pain
- Disorders of muscles: myasthenia gravis and muscular dystrophies
- Fibromyalgia

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	Mandatory Task
Quiz	1 hour	20	N	Individual	N
Case Study	Up to 3.500 words	30	N	Individual	N
Final Exam	2 hours	50	N	Individual	N
Prescribed Texts					
No prescribed texts					
Teaching Periods					

Autumn (2025)

Campbelltown

Hybrid

Subject Contact Zoran Pletikosa (<https://directory.westernsydney.edu.au/search/name/Zoran Pletikosa/>)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NATS2038_25-AUT_CA_3#subjects)

Summer (2025)

Online

Online

Subject Contact Zoran Pletikosa (<https://directory.westernsydney.edu.au/search/name/Zoran Pletikosa/>)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NATS2038_25-SUM_ON_2#subjects)