NURS 1024 BIOSCIENCE 2

Credit Points 10

Legacy Code 401470

Coordinator Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

Description Bioscience 2 introduces the concepts associated with alterations in health across the lifespan. It will introduce pathophysiology, pharmacology, immunology, and microbiology related to health breakdown due to injury or disease. This subject specifically examines impact of microorganisms on the health of people and the body�s natural defences when dealing with infections and injuries and its significance to person centred care.

School Nursing & Midwifery

Discipline General Nursing

Student Contribution Band HECS Band 1 10cp

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

Level Undergraduate Level 1 subject

Co-requisite(s) NURS 1023 Bioscience 1

Equivalent Subjects BIOS 1011 - Bioscience 2

Restrictions

Students must be enrolled in 4691 Bachelor of Nursing or 4780 Bachelor of Nursing – WSU Online or 4693 Bachelor of Nursing (Advanced). Unitrack students may study this unit as a miscellaneous unit.

Assumed Knowledge

Students should have an understanding of the core concepts and terminology related to the structure, function and homeostasis of the human body.

Learning Outcomes

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

1. Identify the role of the immune system in the maintenance of health
2. Define the role of microorganisms associated with health breakdown within communities and healthcare settings
3. Explain pharmacological principles associated with commonly prescribed drugs during health breakdown across the lifespan
4. Describe infection control and prevention strategies when providing safe patient centred care
5. Explain physiological concepts underlying the body�fs responses to health breakdown due to injury or disease

Subject Content

1. Innate defences:

- 1st and 2nd lines of defences
- The inflammatory process, wound healing, blood clotting

2. Introduction to pharmacology for nurses

- formulations and methods/routes of administration of drugs,
- rights of medications,
- medication errors,
- pharmacokinetics,
- pharmacodynamics
- half-life and therapeutic index,
- Basics of protein synthesis and its relationship to antimicrobial action
- anti-microbial stewardship.

3. Introduction to Microbiology and Infection Control

- Major types of microorganisms and their importance
- Common pathological organisms and their general structures
- Replication of bacteria and viruses
- HAI and risk factors
- Sources of infection and modes of transmission
- Nursing interventions in infection control

4. Immune system 1 – Lymphatic system.
5. Immune system 2 - Adaptive defences.

- 3rd line of defences
- Development of immunity
- Vaccinations (active and passive immunity acquired naturally and artificially)
- Breakdown of the immune system

6. Introduction to pathophysiology

- Aetiology – pathogenesis – course of a disease - structural changes – functional changes – signs/symptoms - clinical course - prognosis.
- Appropriate interventions ranging from prevention, diagnosis, detection of structural changes, functional changes, treatment/management (nursing and pharmacological), prognosis.

7. Introduction to genetics.

- Mitosis, meiosis
- Patterns of inheritance

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
Multiple Choice	30 minutes x 3 quizzes	20	N	Individual
Case Study	1200 words	40	N	Individual
Final Exam	1 hour	40	Y	Individual

Teaching Periods

WSU Online TRI-2 (2022)
Wsu Online
Online
Subject Contact Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NURS1024_22-OT2_OW_O#subjects)

Spring (2022)

Campbelltown
Day
Subject Contact Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NURS1024_22-SPR_CA_D#subjects)

Hawkesbury
Day
Subject Contact Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NURS1024_22-SPR_HW_D#subjects)

Liverpool
Day
Subject Contact Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NURS1024_22-SPR_LP_D#subjects)

Parramatta - Victoria Rd
Day
Subject Contact Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NURS1024_22-SPR_PS_D#subjects)

WSU Online TRI-3 (2022)

Wsu Online
Online
Subject Contact Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NURS1024_22-OT3_OW_O#subjects)

WSU Online TRI-1 (2023)

Wsu Online
Online
Subject Contact Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NURS1024_23-OT1_OW_2#subjects)

WSU Online TRI-2 (2023)

Wsu Online
Online
Subject Contact Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NURS1024_23-OT2_OW_2#subjects)

Spring (2023)

Campbelltown
On-site
Subject Contact Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NURS1024_23-SPR_CA_1#subjects)

Hawkesbury
On-site
Subject Contact Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NURS1024_23-SPR_HW_1#subjects)

Liverpool
On-site
Subject Contact Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NURS1024_23-SPR_LP_1#subjects)

Parramatta - Victoria Rd
On-site
Subject Contact Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

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WSU Online TRI-3 (2023)

Wsu Online
Online
Subject Contact Bashir Sumar (https://directory.westernsydney.edu.au/search/name/Bashir Sumar/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NURS1024_23-OT3_OW_2#subjects)