# NATS 1021 CONCEPTS IN HUMAN PHYSIOLOGY (WSTC)

**Credit Points** 10

**Legacy Code** 700295

**Coordinator** Anne Bertoldo (https://directory.westernsydney.edu.au/search/name/Anne Bertoldo/)

**Description** This subject introduces the core concepts and terminology necessary to provide a basic understanding of the physiological responses of the human body using relevant examples. These include the processes of homeostasis, cell-cell interactions and the physical and chemical transport processes that are required to carry out integrated functions. Students will explore these key physiological concepts through practical hands-on experiments and in interactive group work in prac and tutorial classes, respectively. The subject provides the foundation to study the physiology of human organ systems.

**School** 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 1 subject

**Equivalent Subjects** BIOS 1033 Concepts in Human Physiology

**Incompatible Subjects** BIOS 1025 Introduction to Physiology
NATS 1009 Human Anatomy Physiology 1
BIOS 1022 Introduction to Human Biology
BIOS 1026 Introduction to Physiology (WSTC)

**Restrictions**

Students must be enrolled at Western Sydney University, The College. Students enrolled in Extended Diplomas must pass 40 credit points from the preparatory subjects listed in the program structure prior to enrolling in this University level subject.

## Learning Outcomes

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

1. Describe the component parts of a cell and how cell interactions occur
2. Recognise that all physiological systems are interdependent
3. Define the concept of homeostasis and explain how different mechanisms regulate its function
4. Explain physical, chemical and electrical principles of cell communication
5. Recognise structure and function relationships
6. Collect and interpret data from practical classes investigating physiological principles

## Subject Content

1.Cell function, membranes, communication and their interdependence
2.Information flow:
a.Physical principles of physiology: pressure driven (flow, viscosity and resistance) and electrically driven (force, potential, and currents)
b.Chemical principles of physiology: energy, intermolecular forces, gradients and kinetics
3.Homeostasis
4.Interpretation of physiological data

## 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 | Mandatory |
|---|---|---|---|---|---|
| Multiple Choice | 30 minutes each | 30 | N | Individual | |
| Multiple Choice | 30 minutes each | 30 | N | Individual | |
| Intra-session examination | 2 hours | 40 | Y | Individual | |