

# BIOS 1033 CONCEPTS IN HUMAN PHYSIOLOGY

**Credit Points** 10

**Legacy Code** 301254

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**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

**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/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

**Level** Undergraduate Level 1 subject

**Equivalent Subjects** NATS 1009 NATS 1021

**Incompatible Subjects** BIOS 1025 Introduction to Physiology  
BIOS 1022 Introduction to Human Biology

## 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 principals 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/<br>Group Task |
|--|-----------------|---------|-----------|---------------------------|
| 5 x tutorial worksheets                        | 30 minutes each | 40      | N         | Individual                |
| 3 x Practical Quizzes                          | 15 minutes each | 30      | N         | Individual                |
| Multiple choice and/or short answer quizzes x2 | 30 minutes each | 30      | Y         | Individual                |