

## Module specification

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Module Code	NAD603
Module Title	Drug Interactions in the Human Body
Level	6
Credit value	40
Faculty	Social and Life Sciences
HECoS Code	100744
Cost Code	GADT

## Programmes in which module to be offered

Programme title	Is the module core or option for this programme
BSc (Hons) Nutrition and Dietetics	Core

## Pre-requisites

N/A

## Breakdown of module hours

Learning and teaching hours	42 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	6 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
<b>Total active learning and teaching hours</b>	<b>48 hrs</b>
Placement / work based learning	0 hrs
Guided independent study	352 hrs
<b>Module duration (total hours)</b>	<b>400 hrs</b>

<b>For office use only</b>	
Initial approval date	31/08/2022
With effect from date	September 2024



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Date and details of revision	29/04/2024 – new module title, updated breakdown of module hours, Aims, LO's, assessment strategy, Syllabus and Reading List for implementation from Sept 2024.
Version number	2

## Module aims

This module will develop an understanding of the mechanisms by which major drug categories affect the human body. Drug characteristics, route of administration, mechanism of action, and interactions will be investigated. This will complement the advanced dietetics module students will also study at this level.

## Module Learning Outcomes - at the end of this module, students will be able to:

1	Explain the key mechanisms by which commonly used drugs in the major drug categories affect the human body.
2	Apply theory of pharmacokinetic and pharmacodynamic principles to solve clinical complication.
3	Critical appraise the evidence behind drug interventions and treatment limitations in dietetic practice.
4	Critically evaluate the action of drugs and factors affecting the interactions of drugs with the human body.

## Assessment

Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

**Assessment 1:** Examination (2 hours)

**Assessment 2:** Presentation (20 minutes)

Students will present a case study of a commonly used drug and evaluate key factors affecting the interaction of the chosen drug with the human body. Students will also be asked to critically appraise the evidence behind drug interventions and treatment limitations of the drug and its impact on the human body.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1, 2	Examination	50



2	3, 4	Presentation	50
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## Derogations

A minimum grade of 40% must be achieved in all assessment components in order to pass the module.

## Learning and Teaching Strategies

The Active Learning Framework (ALF) will be utilised in the delivery of this module through synchronous and asynchronous content. It will consist of lectures, seminars, interactive online content, practical demonstrations and activities. Practical sessions provide the opportunity to gain experience with different population groups across a range of settings and will support lectures, enabling students to develop applied skills and foster creativity and innovation through the sharing of ideas.

## Indicative Syllabus Outline

The module will cover the following indicative content:

- An overview of major disease processes and related terminology.
- Further exploration of immune system function, including autoimmune diseases
- Classification, aetiology, prevention and treatment of major diseases (e.g. disorders of the immune system, organ dysfunction, cancer, infectious disease).
- Clinical assessment, diagnosis and treatment interventions drug in the management of major diseases and disorders.
- How to identify xanthelasma and arcus senilis.
- Understanding how drugs work through study of pharmacokinetics and pharmacodynamics
- Drug definition and classification
- The relationship between pharmacokinetics and pharmacodynamics
- Pharmacokinetics: Absorption, Distribution, Biotransformation, Elimination
- Pharmacodynamics: Principles of Drug Action, Mechanisms of drug action
- Toxicology and damage produced by exogenous chemicals. Drug - Drug inte
- Integration of physiological systems and their impact on disease progression and management, including monitoring of measurable outcomes.
- The role of nutrition as a component of medical treatment, including drug-nutrient interactions.
- The physical signs of nutrient deficiency/abnormality
- Different classifications of prescription only medicines and Nutrition Borderline Substances, and the role of the dietitian within medicines management and appropriate prescribing.
- The use of and the evidence underpinning complementary and alternative medicine.

## Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

### Essential Reads

Gaskell, E. & Rostron, C. (2013), *Therapeutics and Human Physiology: How drugs work (Integrated Foundations of Pharmacy)*, 1st Edition. Oxford: OUP

### Other indicative reading

Rosenbaum, S. (2017), *Basic Pharmacokinetics and Pharmacodynamics: An Integrated Textbook and Computer Simulations*, 2nd Edition, John Wiley and Sons Ltd, United States.

Neal, M (2020). *Medical Pharmacology at a Glance*, 9th Edition, Wiley, Blackwell

Rae, P., Crane, M. & Pattenden, R. (2018). *Clinical Biochemistry*, 10th Edition, Wiley, Blackwell

### Journals:

Nature

New England Journal of Medicine

The Lancet

British Medical Journal,

Journal of the American Medical Association