

unit guide

Nutrition, Health and Disease
(Public Health)

Part 1 – Disease and immunity

Part 2 - Nutrition

Unit Ref. **SFB-5-203**

Blackboard site

Faculty of Engineering, Science and Built Environment

2010/11

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1. UNIT DETAILS

Unit Title:	Nutrition, Health and Disease (Public health)
Unit Level:	5
Unit Reference Number:	SFB-5-203
Credit Value:	2 Credit = 30 CATS units
Student Study Hours:	300
Contact Hours:	78
Private Study Hours:	222
Pre-requisite Learning (If applicable):	None
Excluded Combinations:	None
Course(s):	Biosciences & Food
Year and Semester	2010/11 Semester 1 + 2
Unit Coordinator:	Dr Neil Morgan
UC Contact Details (Tel, Email, Room)	02078157956 morgannl@lsbu.ac.uk B142
Teaching Team & Contact Details (If applicable):	Dr Michael Byford byfordmf@lsbu.ac.uk B150
Subject Area:	Bioscience & Food
Summary of Assessment Method:	2 Course works and 1 examination

"This guide is designed to help you structure your learning by providing an indicative structure and content for the unit. It is a guide and not a definitive statement of what you will be taught. We will try to follow this published schedule as far as possible, but there may be some variation as the unit develops and as we try to match the pace and content of our teaching to student need"

2. SHORT DESCRIPTION

This unit gives an insight into the concepts of health and ill-health. An epidemiological approach is taken throughout and emphasis is given to the importance of an evidence base. Methods of assessment of health status are covered including- Anthropometry, Biochemical and Clinical indicators, Dietary Survey and Immunological techniques. Immunological and diet-related diseases are investigated. Strategies for prevention and management are evaluated.

3. AIMS OF THE UNIT

The aims of this unit are:

- Give an overview of what is meant by health and disease.
- Introduce students to an epidemiological /evidence based approach to the study of disease.
- Provide experience of a range of techniques used in the assessment of health status.
- Focus attention on diseases prevalent in the UK and of public concern.
- Develop a critical understanding of strategies for prevention and management of ill-health.

4. LEARNING OUTCOMES

Knowledge and Understanding:

- Develop an understanding of the terms health and disease states.
- Develop an awareness of problems of definition and diagnosis of health conditions.
- Understand the pathophysiology of specific diseases.
- Appreciate the research base in the aetiology and prevention of disease.
- Demonstrate a critical approach to types of epidemiological studies.
- Identify obstacles and develop prevention and management strategies for named health disorders.

Intellectual Skills:

This unit will develop the students' ability to perform critical analysis of epidemiological studies. A problem-solving approach in terms diet and lifestyle interventions will be fostered.

Practical Skills:

This unit has a significant practical component in the areas of immunology, anthropometry, dietary assessment and food product development and evaluation.

Transferable Skills:

- Oral and written communication skills through group discussion and the assessed coursework.
- Research skills through the analysis of published work.
- Use of information technology.

Employability:

This unit will provide students with a broad understanding of Public health. It should pave the way further study in Level 6.

5. ASSESSMENT OF THE UNIT

Assessment:

Assessment of the unit will consist of 2 elements:

- Coursework in semester 1 based on a laboratory report (20%) and a critical review in semester 2 based on evidence from epidemiological studies (20%).
- End-of-year exam based on essay questions (60%).

Any deferral / referral in the laboratory aspect of this unit will be required to be undertaken at the next opportunity in the following academic year.

6. FEEDBACK

Feedback will normally be given to students 15 working days after the submission of an assignment.

7. INTRODUCTION TO STUDYING THE UNIT

INDICATIVE CONTENT

- Health and ill-health
- Disease classification
- Epidemiology-types of studies
- Anthropometric measurements
- Biochemical indicators
- Clinical indicators
- Dietary assessment
- Basic immunology
- Immunological conditions an evidence based approach aetiology-prevention
- Type 1-4 food allergies and food intolerance
- Coeliac disease
- Lactose intolerance
- Diabetes
- HIV
- Measles
- CJD
- Treatment and prevention strategies-vaccines,
- Dietary intervention
- Diet-related diseases an evidence based approach aetiology-prevention
- Obesity
- Cardiovascular disease
- Gastrointestinal disorders such as reflux disease, constipation, diverticular disease, irritable bowel syndrome & cancer of the colon and rectum
- Dental disorders
- Osteoporosis
- Anaemias of nutritional origin-Iron deficiency, Folate deficiency, B12 deficiency
- Diet and lifestyle intervention strategies

CONTENT (PART 1)

Health and Disease

Theories of health and ill health in different cultures and times.

Types of Disease

Infectious, congenital (genetic and acquired), degenerative, metabolic (endocrine and nutritional), immunological (auto immune, allergic, inflammatory), nepotistic.

Immunology

The non-specific immune system and inflammation.

Specific immunity: B cells and antibodies, T cells.

Clinical aspects: vaccination, immunodeficiency, hypersensitivity and autoimmunity.

Using antibodies: immunoassays and monoclonal antibodies.

Recovery from disease

Immunological and chemotherapy.

CONTENT (PART 2)

Nutrition (to be provided later in part 2 of the unit guide)

7.1 Overview of Types of Classes

Teaching and Learning Pattern:

The unit comprises 2 hours of formal lectures per week along with a 1-hour long tutorial alternate weeks. In a week a 2-hour revision lecture will be available to help prepare students for the examination.

7.2 Importance of Student Self-Managed Learning Time

Self-managed learning time is a key aspect of this unit and it is important that students make full use of this time to prepare for tutorials and consolidate lecture material.

8. THE PROGRAMME OF TEACHING, LEARNING AND ASSESSMENT

Lectures and tutorials (Tuesday 10-1, Room B232)

	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
Mon														
Tue			[Borough Road] - B232 Morgan, Neil 10:00-12:00 W1-12,16		[Borough Road] - B232 Morgan, Neil 12:00-13:00 W1,3,5									
Wed					[Borough Road] - B232 Byford, Michael 12:00-13:00 W2,4,6-12,16					[Borough Road] - J302 Morgan, Neil 14:00-17:00 W2-6				
Thu														
Fri														
Sat														

PRACTICAL WEDNESDAY 2-6

J302

NLM/MB

- 1 Cells and organs of the immune system.
- 2 Pathogenic microbes.
- 3 Immunoassays - Qualitative and quantitative.
- 4 Visit to a museum – Fleming Museum
- 5 Semester 2 Isolation and identification of pathogenic microbes

9. LEARNING RESOURCES

Indicative Sources:

Core reading:

- Gibney MJ, Margetts BM, Kearney JM & Arab L. (2004) *Public Health Nutrition*. Wiley-Blackwell: Oxford.
- Playfair, JHL & Bancroft GJ (2008) *Infection and Immunity*, 3rd edition. Oxford University Press: Oxford.
- Thomas B & Bishop J (2007) *Manual of Dietetic practice*, 4th edition.
- Blackwell Publishing: Oxford.
- Journals - Nutrition Research Reviews, Proceedings of the Nutrition Society, European Journal of Epidemiology.

Optional reading:

- Brostoff J & Challacombe SJ (2002) *Food Allergy and Intolerance*, 2nd edition. Saunders:London.
- Skypala I & Venter C (2009) *Food Hypersensitivity-Diagnosing and Managing Food Allergies and Intolerance*. Wiley-Blackwell: Oxford.
- Stratton RJ, Green CJ & Elia M (2003) *Disease-Related Malnutrition an Evidence-Based approach to treatment*. CABI publishing: Wallingford.

