

<b>MODULE TITLE:</b>	<b>NUTRITION THROUGH THE LIFECYCLE</b>	
<b>MODULE CO-ORDINATOR(S):</b>	Dr Helen McCarthy	
<b>TEACHING STAFF RESPONSIBLE FOR MODULE DELIVERY</b>	Dr Helen McCarthy, Dr Mary McCann, Dr Philip Allsopp, Dr Emeir McSorley	
<b>HOURS:</b>	Lectures	44hrs
	Practical	3hrs
	Private Study	53hrs
	Total notional student effort	100hrs

### **RATIONALE**

This module provides the student with an overview of nutrients and their role in human nutrition necessary for further study of the impact of nutrition through the lifecycle. The module explores factors determining food choice in healthy people at various stages in the life cycle. It introduces how dietary factors impact on health through the lifecycle. This is important for health promotion, nutrition and dietetics.

### **AIMS**

To introduce the concepts that underpins our knowledge of the nutritional requirements and factors influencing the food choice of healthy people from pre-conception to old age.

### **CONTENT**

Students will be provided with an overview of nutrients and their role in human nutrition necessary for further study of the impact of nutrition through the lifecycle. The module will then cover all aspects of nutrition and food choice from pre-conception through to old age. Dietary intake and the influences on this of culture, religion, and socio-economic factors will be addressed. It will consider key theories (Barker Hypothesis) and government policy and strategies (Foresight Report) for promoting good nutrition. The consequences of poor nutrition and diet at all stages of the lifecycle will be explored including under and over nutrition (faltering growth, overweight and obesity, common nutritional deficiencies). Practical experience of Children's growth charts – their use and limitations will be obtained.

### **LEARNING AND TEACHING METHODS**

This module is delivered through a series of lectures supported by tutorials and a practical class on the use and limitations of growth charts. Lecture material is supported by the core text and students have the opportunity to engage in independent learning through coursework and practical work. Lecture notes and other relevant course material are available on a dedicated Blackboard Learn site with links to relevant academic and commercial sites.

## Human Nutrition timetable

Lectures (50 min sessions) delivered in two or three-hour slots per week (~8 sessions per week). Exemplar timetable:

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Week	Lecture Topic	(lecture number)
<b>Beginning</b>		
Week 1	Introduction to module; Food and Nutrients (1-2) The physiology of nutrient digestion and absorption (3-4) Macronutrient metabolism (carbohydrate, fat) (5-6) Macronutrient metabolism (protein, alcohol) (7-8)	
Week 2	Micronutrient function (vitamins) (9-10) Micronutrient function (minerals and trace elements) (11-12) Review of nutrients and energy balance (13-16)	
Week 3	Pre-conception nutrition (17-19) Nutrition in pregnancy, The Barker hypothesis (20-22) Infant feeding (lactation and breast feeding, formula feeding) (23-24)	
Week 4	Infant and preschool nutrition (25-27) Child nutrition (28-29) Monitoring growth/use of growth charts (30-32)	
Week 5	Preadolescent nutrition (33) Nutrition of adolescents (34) Nutrition of adults (35-36) Nutrition of the older adult (37-38) Government nutritional recommendations (39-40)	
Week 6	Vegetarian and vegan diets (41-42) Diets of ethnic minorities (43-44)	

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**Practical:** Practical (120-180 min session) delivered in week 4 and will focus on the use and limitations of growth charts.

**Group presentations:** Group presentations (n=3-4) will be scheduled during week 5-6. Each presentation will be 10 minutes with 5 minutes for questions. Exemplar topics might include:

- Iron during pregnancy – is it really that important?
- Breast feeding in Northern Ireland
- Manufacture infant formula – is there a place for them?
- The importance of nutrition and lifestyle to male and female fecundity
- Do processed baby foods lack nutritional value?
- Obesity in pre-school children – are parents to blame?
- Diet or exercise – what really reduces obesity in children?
- Weaning – what is best practice?

- Vitamin supplementation in early childhood – what is the evidence?
- Follow-on milks – do we really need toddler milks?
- Food to be avoided during pregnancy
- Guidelines on fish consumption during pregnancy – risks & benefits
- Vitamin supplementation in pregnancy – what is the evidence?
- Nutrition in pregnancy for a ‘brainy’ baby – what’s the evidence?
- Alcohol, smoking and caffeine during pregnancy
- Birth weight and future health – what is the evidence?

## **ASSESSMENT**

The module will be 100% coursework assessed and assessment will comprise three components

### **Part 1(30%)**

Two short tests comprising both multiple choice questions (MCQ) and “fill in the blank” questions will be undertaken at the end of weeks 3 and 5. Each test will be worth 15% of the module mark.

### **Part 2 (30%)**

The practical skills on the assessment of the growth of children will be assessed through class work in week 4 supported by a written assignment including references, explaining the observations on a child’s growth and its limitations. This growth chart assignment will be worth 30% of the module mark.

### **Part 3 (40%)**

Presentation skills and knowledge and understanding will be assessed through group work presentations on given topic supported by a written assessment (20% for group presentation; 20% for individual report).

## **READING LIST**

### **Required reading**

- Brown, JE, Isaacs J, Krinke B, Lechtenberg E, and Murtaugh M. *Nutrition through the Lifecycle*. 2013. 5<sup>th</sup> Edition. Cengage Learning.

### **Recommended Reading:**

- Geissler CA & Powers HJ. *Human Nutrition*. 2010. 12<sup>th</sup> Edition, Elsevier Churchill Livingstone.
- Gibney MJ, Lanham-New SA, Cassidy A, Vorster HH (2009). *Introduction to Human Nutrition*. (Second Edition) Nutrition Society Textbook Series. Wiley Blackwell.

## **SUMMARY DESCRIPTION**

This module provides an overview of human nutrition and discusses the changing nature of nutritional requirements and determinants of food selection through the human life cycle.