

Curriculum framework for functional dietetic practice

to meet the standards for practitioner registration with the Health and Care Professions Council

Professional practice for the post-genome era: predictive, preventive, personalised, participatory (P4)

Consultation Version: November 2015





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ABBREVIATIONS & ACRONYMS

- BANT British Association for Applied Nutrition and Nutritional Therapy
- BDA British Dietetic Association (Association for Dieticians)
- CPD Continuing Professional Development
- CPE HCPC Standards of Conduct, Performance and Ethics
- CNHC Complementary & Natural Healthcare Council
- EBP Evidence-based practice
- EFAD European Federation of Associations of Dietitians
- HCPC Health and Care Professions Council
- HEI Higher Education Institution
- KSF Knowledge and Skills Framework
- NHS National Health Service
- NOS National Occupational Standards
- PSA Professional Standards Authority
- QAA Quality Assurance Agency for Higher Education

- SET HCPC Standards of Education & Training
- SFH Skills for Health
- SOP HCPC Standards of Proficiency
- TP Training Provider



Foreword

From first registration with the Council for Professions Supplementary to Medicine until the 2001 formation of the Health Professions Council, the profession of dietetics was principally confined to those who treat medical conditions with diet in the National Health Service (NHS). In 2015 the scope of practice has widened so that dietetics, as practised, rightly encompasses the whole domain not simply providing service to one employer. As the practice of 'dietetics' has widened outside of the NHS so have the professional and other organisations involved in delivering nutrition and health care proliferated. The British Dietetic Association, trade union and professional association, represents the dietetic community working primarily in the NHS. Professional registration has historically been linked to the professions supplementary to medicine working in the public sector. Current evidence on the individualised requirements of, and response to, diet now render the NHS one-size-fits-all approach as outdated and not sustainable. Up-to-date dietetic practice in the postgenome era demands a new approach in the delivery of care to all service users.

The Health and Social Work Professions Order 2001 established the HCPC and the Constitution Order 2009 made by the Privy Council sets out the composition of the HCPC. The HCPC has made available unofficial consolidations incorporating all of the amendments made to the Order up to 1 April 2014.

- HCPC Consolidated Health and Social Work Professions Order (July 2014)
- <u>HCPC Consolidated Constitution Order (July 2014)</u>

These documents set out how the HCPC works and its relationship to the various professions. It is on the basis of the legislation that BANT has developed a Curriculum Framework for functional dietetic practice for the development of education and training to meet the HCPC entry level standards.

While it is expected that training institutions experienced in delivery nutritional therapy programmes will seek to have their courses approved by the HCPC, it is also envisaged that others may want to develop courses from the BANT curriculum framework for functional dietetic practice.

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Key terms and definitions

Body systems

Mechanisms that the whole body uses for functional status.

Capability

Extent to which individuals can adapt to change, generate new knowledge and continue to improve their performance

Competence

What individuals know or are able to do in terms of knowledge, skills and attitude

Complex System

A system with a large number of interactive components and its dynamic interactions.

Detoxification

The biotransformation of molecules through several phases to become hydrophilic and facilitate excretion.

Evidence-based practice

Integrates individual expertise with the best available evidence from systematic research to assist in decision making about practice.



Holistic

Recognising that **health** and **well-being** should be considered as a whole and in relation to everything that affects a person's life i.e. that component parts should not be considered in isolation from others but as part of a complex system.

Functional nutrition health

Person-centred, recognising that health assessment is individual and related to outcomes (physiological and biochemical markers) and bringing about changes necessitates understanding the behaviour of the system and identifying points of leverage to drive transformation.

Health

Health is an individual's metabolic flexibility and capacity to adapt physically, cognitively and socially to continuing changes in the environment to maintain complete well-being and not merely the absence of disease or infirmity.

Refs:

1. Huber M, Knottnerus JA, Green L, et al. How should we define health? BMJ. 2011;343:d4163. doi: 10.1136/bmj.d4163.

2. Van Ommen B, van der Greef J, Ordovas JM, Daniel H. Phenotypic flexibility as key factor in the human nutrition and health relationship. *Genes & Nutrition*. 2014;9(5):423. doi:10.1007/s12263-014-0423-5.

3. World Health Organization 1948

Homeodynamics

A range of continuously occurring metabolic and physiological activities that enable an individual to adapt to changing circumstances, stresses and experiences as a **c**omplex system.

Homeostasis

Buffered capacity to respond to a perturbation.



Nutrient

A nutrient is a constituent of a diet, natural or designed, that plays a unique (biochemical or structural) role in a function, i.e. it can serve as: 1) an energy yielding substrate; or 2) a precursor for the synthesis of macromolecules or of other components needed for normal cell differentiation, growth, renewal, repair, defence and/or maintenance; or 3) a required signalling molecule, cofactor or determinant of normal molecular structure/function and/or a promoter of cell and organ integrity.

Nutraceuticals

Naturally derived bioactive compounds that are found in foods, dietary supplements and herbal products, and which have health promoting, disease preventing or medicinal properties. This does not include essential nutrients.

Orthomolecular

Natural chemical constituent(s) of the body.

Resilience

Ability to respond to a perturbation and maintain homeostasis

Standards

Comprise: 1) HCPC Standards of Proficiency 2) HCPC Standards of Education and Training 3) HCPC Standards of Conduct, Performance and Ethics

Systems Biology

The networks that form the whole of living organisms are more than the sum of their parts. Cross-disciplinary technological innovation allows cross scale examination (network of networks) to analyse and predict state transitions in biological systems.



SECTION 1 INTRODUCTION

Functional dietetics and optimal nutrition

Nutrients and other food components influence the function of the body, protect against disease, restore health, and determine people's response to changes in the environment. Functional dietetics encompasses individual prescriptions for diet and lifestyle in order to alleviate or prevent disease and to promote optimal gene expression and wellness through all life stages. Current evidence indicates that one-size-fits-all models are outdated and that clinically meaningful promotion of metabolic function can be achieved by means of a variety of dietary approaches. Functional dietetic interventions may include guidance on diet and nutrition, procedures to promote colo-rectal health and support digestion and absorption, the avoidance of toxins and/or allergens and the appropriate use of supplementary nutrients, including phytonutrients. Dietary intervention based on knowledge of nutritional requirement, nutritional status, and genotype (i.e., "personalised optimum nutrition") can be used to prevent, mitigate or cure chronic disease.

Why a new curriculum framework?

The BANT curriculum framework for functional dietetic practice has evolved from the Nutritional Therapy National Occupational Standards to become a set of standards to meet the HCPC Standards of Proficiency for Dietitians. The HCPC use SOP instead of NOS so that they can be flexibly applied to a variety of different work in which registrants engage.¹ The SOP perform two functions: they are the entry standards for registration and also those for safe and effective practice.² The HCPC is an independent regulator and its SOPs necessarily differ from the knowledge and skills framework competency standards that are NHS driven targets: the HCPC is not an arm of the NHS.³

Nutritional therapy has developed over the last 30 years without the constraints of NHS practice or the competing public health one-sizefits-all paradigm where national dietary guidelines are adopted in clinical practice and 'evidence-based nutrition' is showcased as the Eatwell Plate and 5 a day guidance. Functional dietetics comprises individualised dietary, supplement and lifestyle advice within a Functional Medicine framework (Appendix II) to promote optimal physical and mental well-being. It is science-based and appreciates the importance of variations in metabolic function deriving from genetic, epigenetic and environmental differences amongst individuals.

- ² HCPC PLG SOP 25 April 2006
- ³ HCPC PLG SOP 19 June 2006

¹ HCPC PLG SOP 26 January 2005



SECTION 1 INTRODUCTION (Contd.)

1.1 Underpinning principles and core values

Functional dietetics stands in contrast to NHS dietetics as being person-focused rather than one-size-fits-all, and adapting population based practice to be as inclusive as possible. Person-centred practice is underpinned by the following principles:

- **Biochemical individuality**: understanding and appreciating the importance of variations in metabolic function deriving from genetic, epigenetic and environmental differences among individuals.
- **Patient-centred**: recognition of the evidence supporting a patient-centred approach rather than a disease-centred approach. One-size-fits-all is not appropriate in the personal genome era.
- **Dynamic balance** of internal and external factors: understanding that resilient homeostasis (the buffering capacity to respond to a perturbation) is important for physiological equilibrium.
- Web-like interconnections: human physiology functions as an orchestrated network of interconnected systems, rather than individual systems functioning autonomously and without effect on each other.
- Health as a positive vitality and not merely the absence of disease.
- **Promotion of organ reserve** as the means to enhance health span by maintaining genomic stability and mitochondrial capacity so decreasing morbidity.

The science of complex adaptive systems provides important concepts and tools for responding to the challenges of modern health care. Clinical practice, organisation, information management, research, education, and professional development are all interdependent. While unpredictability and paradox are ever present, and some things will remain unknowable, new conceptual frameworks like the 'Food Reactome' (Appendix II) incorporate a dynamic, emergent, creative, and intuitive model to replace traditional "reduce and resolve" approaches to clinical care and service organisation.



SECTION 1 INTRODUCTION (Contd.)

1.2 The scope of dietetic practice

Dietetic practice is the application of the science of nutrition to the feeding and education of groups of people and individuals in health and disease. The scope of dietetic practice is such that dietitians may work in a variety of settings and have a variety of work functions.

1.3 Educational philosophy

Traditional education and training largely focuses on enhancing competence (knowledge, skills, and attitudes). Functional dietetic practice in a complex environment demands education not merely for competence, but for capability (the ability to adapt to change, generate new knowledge, and continuously improve performance). Capability is enhanced through feedback on performance, the challenge of unfamiliar contexts, and the use of non-linear methods such as story-telling and small group, problem based learning. Education for capability must focus on process (supporting learners to construct their own learning goals, receive feedback, reflect, and consolidate) and avoid goals with rigid and prescriptive content.

References:

Plsek PE, Greenhalgh T. The challenge of complexity in health care. BMJ: British Medical Journal. 2001;323(7313):625-628.

Fraser SW, Greenhalgh T. Coping with complexity: educating for capability. BMJ: British Medical Journal. 2001;323(7316):799-803.



SECTION 2 Structure and delivery of dietetic training programmes

2.1 Action required to meet Standards of Proficiency

Education should encourage the development of a functional dietitian to be reflective, evidence based and research-minded. It should embed the adherence to all current relevant legislation including HCPC codes of practice and those of BANT (professional association). Such training should include a range of transferable skills as outlined in Appendix 1 (QAA 2014). Training must include sufficient clinical practice to enable students to develop as reflective, independent, safe, legal and effective practitioners.

2.2 Programme Admissions

The SET require that admissions procedures garner sufficient information to allow the applicant and the training provider to make informed choices about entry to the programme. Such procedures cover command of English, checks on health, criminal convictions as well as appropriate academic entry standards (including accreditation of prior (experiential) learning and other inclusion mechanisms). The education provider must have equality and diversity policies in relation to applicants and students, with appropriate mechanisms to ensure implementation and monitoring.

2.3 Clinical Practice

The overall aim of clinical practice must be to prepare a lawful, safe and effective practitioner who is able to practise with autonomy and therefore the registration standards of the HCPC. Clinical practice assessment must be conducted in a realistic working environment (situational assessment) and be fully supervised (observed) by suitably qualified practitioners working as clinical tutors. TPs will need to demonstrate that their graduates are competent to practise safely to comply with the SOP. The HCPC approval process will require that TPs demonstrate that they meet their SET requirements.

2.4 Transferable Skills

In line with QAA guidance transferable skills should also be embedded in programmes (see Appendix I)



SECTION 2 Structure and delivery of dietetic training programmes (Contd.)

2.5 Assessment

Assessment methods must demonstrate an evolving process of complexity and preparation to practise in a professional capacity and assessment methods must relate to the Learning Outcomes. These must be based on the SEEC, SET, SOP and CEP. Professional competence to practise requires an effective synthesis of a wide range of knowledge and skills (inclusive of reflection and research) and graduates must demonstrate intellectual flexibility within a realistic clinical practice environment. This must be based on FHEQ level 6. Full details of the framework can be accessed via the QAA website www.gaa.ac.uk.

2.6 Academic Assessment Methods

There should be both formative and summative assignments, with the formative assessment information as the basis of the summative function. A variety of assessment methods should be employed, for example- essays, various tests including multiple choice, SAT, SET, and examinations, open book and online, oral presentations, debates and discussions, poster presentations, and production of leaflets, websites, information sheets, literature review, evaluation of a functional dietetic approach, critical appraisals of research papers, case evaluation, and reflection. A training provider will fit the assessment method to the course level as appropriate. All assessment methods should embed one or more of the Transferable Skills (Appendix I).

2.7 Clinical Practice Assessment

Clinical practice assessment must be conducted in a realistic working environment and be supervised and observed in accordance with the SET. Students should conduct a series of consultations covering an appropriate scope of practice.

2.8 Study time

The minimum length of study time has been determined as a total of 1500 study hours including appropriate clinical studies.



SECTION 2 Structure and delivery of dietetic training programmes (Contd.)

2.9 Reference Standards

- HCPC Standards of Proficiency
- HCPC Standards of Education and Training
- HCPC Standards of Conduct, Performance and Ethics

SEEC Descriptors ref:

- I. Development of Knowledge and Understanding
- II. Cognitive/Intellectual skills
- III. Key/transferable skills
- IV. Practical skills

Framework for Higher Education in England, Wales and Northern Ireland (FHEQ) ref levels 4 Certificate of Higher Education, Level 5 Higher National Diplomas, and Level 6.

The SEEC Descriptors, FHEQ and the Standards should be read in conjunction with this CC. These set out the knowledge, understanding and skills which support the achievement of the Standards, demonstrating and facilitating a direct and clear relationship between knowledge and action.



SECTION 3 Core Element

This section outlines the areas that a dietetics student must achieve to gain proficiency and meet entry level registration standards of the HCPC. It is split into two areas, Health Science and Clinical. These two areas have been divided for the purpose of clarity. The subject headings are not indicative of module titles nor structure. Institutions are encouraged to adopt an integrated approach to reflect the progress from health to disease and the possibility for intervention/management with functional dietetics.

Students must be able to communicate in English to the standard equivalent to level 7 of the International English Language Testing System.⁴

Aims are overall intentions on the part of the programme. Where more than one level is indicated this is intended to show progression of increased complexity of this subject during the course of study. Learning outcomes are reflective of the level of competence anticipated on completion of the subject and it is suggested that training providers revisit subject material at various stages throughout the course.

The importance of reflective practice should be acknowledged and incorporated throughout. Course design and the methods by which training providers wish to implement the aims and learning outcomes are the responsibility of the individual institution.

HCPC approval process will ensure that all aims and learning and competency outcomes are met to achieve the SOP.

⁴http://www.ielts.org/test_takers_information/what_is_ielts.aspx



3a.1 Anatomy and Physiology

Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L4	HE L5	HE L6
To provide integrated knowledge of those aspects of anatomy and physiology which are essential for understanding health and the	3a.1.1 3a1.2	Explain basic physiological terms and anatomical directions related to the body; and landmark the organs, glands, major blood vessels, lymph vessels and lymph glands.		х		
mechanisms and clinical features of altered health and disease		Describe functions of cell organelles, including cell division and protein synthesis.		х		
To ensure an understanding of the web	3a.1.3	Describe the functioning of the major physiological systems** of the body and the integration within the body as a whole.		х		
To ensure an understanding of the web like interaction of physiological processes		** skeletal, muscular, Nervous, sensory, endocrine, respiratory, digestive, urinary, reproductive, cardiovascular, integumentary, lymphatic & immune.		x		
	3a.1.4	Explain the role of the above physiological systems in the maintenance of homeostasis.			х	
	3a.1.5	Distinguish between the concepts of nutrigenomics and nutrigenetics.				x
To understand the effect of genetic factors on cell metabolism and function	3a.1.6	Explain how genetic changes including single nucleotide polymorphisms (SNPs) can affect gene function.			х	
	3a.1.7	Discuss the concept of epigenetic regulation of gene expression.				x



3a.2 Biochemistry / Macronutrients On successful completion of the programme the Aims No. SEEC HE HE HE student will be able to: L4 L5 L6 3a.2.1 Explain the co-ordination and regulation of metabolic х To understand the structure and function pathways by hormones and bio molecules, nutrients of water and the macronutrients. and non-nutrient food bioactives. 3a.2.2 Describe bonding and molecular interactions in х proteins . biological compounds. lipids . carbohydrates • 3a.2.3 Explain properties of water and buffers in biological Understand the structure and function of Х nucleotides and their anabolic and systems. catabolic processes, including energy 3a.2.4 Describe structural characteristics and functions of х production within cells, and their control proteins (inc. enzymes), lipids, carbohydrates, and at molecular, cellular, tissue and whole nucleic acids. body levels. Explain the importance of enzyme co-factors in 3a.2.5 х major metabolic pathways. 3a.2.6 Discuss the evidence for the effects of different Х dietary models on risks to health.



3a.3 Micronutrients, Bio-actives and Phytochemicals (including all bioactives deriving from plants, fungi and algae)

Aims

To explore sources, functions, and interactions of micronutrients, including phytochemicals, phytonutrients and other orthomolecular compounds in the context of the individual's dietary requirements, therapeutic considerations, range of assessment methods and safety.

No.	On successful completion of the programme the student will be able to:	SEEC	HE L4	HE L5	HE L6
3a.3.1	Discuss factors affecting individual requirements for micronutrients, including phytonutrients/ phytochemicals, and other beneficial compounds in foods.			x	
3a.3.2	Discuss bioavailability of micronutrients and other beneficial compounds in foods.			х	
3a.3.3	Explain cellular functions and interactions of micronutrients and other beneficial bioactive compounds in foods.			X	
3a.3.4	Explain signs and symptoms associated with micronutrient/ orthomolecular compound deficiency, imbalance and toxicity.			х	
3a.3.5	Describe the main categories of phytochemicals, including phytonutrients, their occurrence, physiological actions (including anti-nutrient activity) and potential toxicity.			х	
3a.3.6	Compare and contrast different methods used for the assessment of micronutrient and orthomolecular status.				х
3a.3.7	Explore and evaluate the evidence for the traditional and novel uses of nutrients and non-nutritive substances non-nutrient food bioactives.				х



3a.4 Pharmacology

Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L4	HE L5	HE L6
To understand the principles of pharmacokinetics and pharmacodynamics	3a.4.1	Explain general mechanisms of action, possible side effects, including induced nutrient deficiencies, and contraindications of commonly used drugs.			x	
	3a.4.2	Describe factors affecting variability of responses to drugs, and nutraceuticals including genetic influence, age, gender, and health status.			x	
	3a.4.3	Evaluate evidence underpinning information on drug-nutrient interactions.			х	
	3a.4.4	Explore and evaluate factors to consider when selecting nutraceuticals that may be appropriate for individuals.				x



3a.5 Pathophysiology						
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L4	HE L5	HE L6
To provide a systemic, integrated explanation of the common health issues and diseases, their aetiology, clinical features and differential diagnosis.	3a.5.1	Explain the process of abnormal cell growth, tissue injury, inflammation and repair.		х		
To introduce the value and skill of researching information in practice.	3a.5.2	Discuss core clinical imbalances underlying common health issues and disease conditions, including the use of appropriate medical terminology.			x	
	3a.5.3	Recognise, research and discuss the clinical signs and symptoms generated by the body's response to internal and external influences.				x
	3a.5.4	Discuss factors that may affect nutritional requirements, including for example the impact of genetics, environment, disease, bioavailability, absorption, transport metabolism and excretion.			x	
	3a.5.5	Research and evaluate how microbiota can impact on health.				х



3a.6 Food composition						
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L4	HE L5	HE L6
To explore applied food chemistry and the factors which can affect food from farm to fork.	3a.6.1	Describe classifications of foods.		x		
	3a.6.2	Analyse and discuss energy balance in relationship to food intake and energy expenditure.				x
	3a.6.3	Discuss factors affecting nutrient bioavailability.			х	
	3a.6.4	Evaluate the use of food composition tables (nutritional databases) in determining the nutrient content of food.		х		
	3a.6.5	Evaluate Dietary Reference Values (DRVs).		x		
	3a.6.6	Discuss sources of food toxins, possible food safety concerns and adverse reactions to foods.		x		
	3a.6.7	Discuss the regulations governing food from farm to fork, and effects of production, processing and preparation on food quality, health and the environment.		x		



3a.6 Food composition (Contd.)						
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L4	HE L5	HE L6
To explore applied food chemistry and the factors which can affect food from farm to fork (Contd.)	3a.6.8	Understand legislation regarding food and nutraceutical product labelling		х		
	3a6.9	Discuss factors affecting nutrient composition of foods, including soil composition, seasonality, manufacturing brands, food processing and cooking methods; and the relationship to food quality and health		x		
	3a6.10	Know where to access historical and recent comparison tables and other data to support understanding of the above factors.		х		
3a.7 Diet and Health						
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L4	HE L5	HE L6
To develop the skill of using food as therapy.	3a.7.1	Discuss factors affecting food choice, including food labeling and interpretation, and how different cultures describe effects of food on health.			х	
	3a.7.2	Describe dietary requirements through the life stages.		х		



3a.7 Diet and Health (Contd.) Aims No. On successful completion of the programme the SEEC HE HE HE student will be able to: L4 L5 L6 Critique dietary models and use of therapeutic foods To develop the skill of using food as 3a.7.3 х therapy (Contd.) in relation to prevention and modulation of functional status and understand how to balance the diet to achieve negotiated goals, redress deficiency and optimise functional status or provide palliative care. 3a.7.4 Qualitatively and guantitatively evaluate food intake х using manual or electronic tools. 3a.7.5 Construct menu plans which meet negotiated Х therapeutic goals exploring the uses of transitional, alternative and functional foods, recipes and menu plans to increase compliance. 3a7.6 Demonstrate awareness of ethical, financial and Х environmental impact of dietary advice. 3a7.7 Discuss the importance of food hygiene, safe Х storage and preparation



3a.7 Diet and Health (Contd.)							
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L4	HE L5	HE L6	
To explore impact of nutrients, from diet and nutraceuticals, in relation to homeodynamics and dysfunction, and their application to improve health.	3a.8.2	Explain the concepts underpinning functional dietetics and NHS dietetics.				x	



3a.8 Nutritional Physiology and Therape	outics					
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L4	HE L5	HE L6
To explore impact of nutrients, from diet and nutraceuticals, in relation to homeodynamics and dysfunction, and their application to improve health.	3a.8.1	Evaluate the concept of functional dietetics as a process driven modality.				x
This section includes the impact of nutrients on the systems mentioned at 3a1.2. (skeletal, muscular, Nervous, sensory, endocrine, respiratory, digestive, urinary, reproductive, circulatory, cardiovascular, integumentary, lymphatic & immune).	3a.8.3	Evaluate roles of research and evidence in informing clinical decision making.				x
	3a.8.4	Evaluate assessment methods including functional, anthropometric and nutrigenetic testing				x
	3a.8.5	Discuss nutrient modulation of metabolic, physiological and behavioural function, including detoxification.				x
	3a.8.6	Discuss nutritional management of nutrient deficiency and/or excess, eating disorders (including starvation) and obesity.				x
	3a.8.8	Discuss impact of stress on nutrient status and nutrient modulation of the HPA axis.				x
	3a.8.9	Evaluate how to recommend nutraceuticals ethically, cost effectively and with regard to the environment and personal circumstances of the individual.				x



Section 3b Clinic

3b.1 Clinical Practice Management and Consultation									
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L5	HE L6				
To have a full understanding of the ethical, administrative, legal and business environment in which the health care practitioner must operate.	3b.1.1	Describe relevant codes of conduct and requirements for student, associate and full members of the professional registering body.		x	x				
	3b.1.2	Discuss issues of time management that enhance or detract from good client practitioner relationships.		x	x				
	3b.1.3	Discuss boundary setting within the practice of integrated health and duty of care as it may apply to practice and clients.			x				
	3b.1.4	Determine requirements for managing client's records including coding and security of documentation, data protection, and maintaining practice finances.		x	x				
	3b.1.5	Discuss legislation relevant to practice and the law, procedures and requirements pertaining to client confidentiality.		x	x				



3b.1 Clinical Practice Management and Consultation (Contd.)

Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L5	HE L6
To have a full understanding of the ethical, administrative, legal and business environment in which the health care practitioner must operate (Contd.)	3b.1.6	Discuss the roles and functions of other health and social care service providers both in their own field and those from which their clients may seek assistance.		x	x
	3b.1.7	Evaluate how and when to provide additional information to a client and when it is appropriate to refer the client to another practitioner. This includes awareness of boundaries to practice in high– penetrance single gene disorders.			x
	3b.1.8	Discuss the meaning of implied and informed consent and procedures for obtaining consent to therapeutic management as well as the circumstances under which written consent should be obtained.		x	x
	3b1.9	Understand how to formulate a referral letter to consultant/other health or care professional on behalf of the safety of the client and in the best interests of that client.		x	
	3b1.10	Understand the laws legislation behind food and supplement labeling including the limitations of the use of health claims in practice.		x	



3b.1 Clinical Practice Management and Consultation (Contd.)								
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L5	HE L6			
To have a full understanding of the ethical, administrative, legal and business environment in which the health care practitioner must operate (Contd.)	3b.1.11	Describe methods for setting achievable goals and timescales for implementing change, including educating the client about potential differences in outcomes from similar programmes of therapy.		x	x			
	3b1.12	Understand that where necessary you may need to refer clients to other colleagues e.g. holidays, illness, withdrawal from practice.		x				
	3b.1.13	Understand the need to act in the best interests of clients at all times, including the importance of your own health as a component of fitness to practise.		x	x			
	3b.1.14	Conduct a consultation in a non-judgmental way using a variety of techniques to aid understanding. These may include verbal, visual, and other methods as appropriate and as available in order to enhance client involvement, concordance and compliance.			x			



3b.1 Clinical Practice Management and Consultation (Contd.)								
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L5	HE L6			
To have a full understanding of the ethical, administrative, legal and business environment in which the health care practitioner must operate (Contd.)	3b1.15	Understand the importance of other lifestyle measures that may impact on health outcomes to help the client/service user/other and their families where necessary gain the best from the individualized therapeutic programme.		x	x			
	3b.1.16	Understand and comply with all Health and Safety regulations as they relate to your practice		x	x			

3b.2 Clinical Practitioner Development and Consultation							
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L5	HE L6		
To explore and practise the skills required to build a beneficial therapeutic and professional relationship.	3b.2.1	Discuss the historical development of functional dietetics, its principles and philosophy.		x			
	3b.2.2	Explore means of verbal and non-verbal communication in the context of the practice setting and methods of encouraging and empowering the client to be as actively involved as possible			x		



3b.2 Clinical Practitioner Development and Consultation (Contd.) Aims No. On successful completion of the programme the SEEC HE HE student will be able to: L5 L6 3b.2.3 Identify and manage restrictions to effective To explore and utilise methods for communication. reflection - developing the practitioner Х х as a life-long learner 3b.2.4 Discuss the complex nature of the client-practitioner х relationship. 3b.2.5 Identify inaccuracies in client information and clarify these inconsistencies with the client. х Demonstrate models of reflection and how these are 3b.2.6 Develop strategies for selfapplied to practice and using reflective skills to х х development. produce an action plan for personal development. 3b.2.7 Demonstrate values appropriate for ethical working in clinical and inter-professional environs. х Х 3b.2.8 Develop evidence based rationale for proposed dietetic advice. Х Х



3b.2 Clinical Practitioner Development and Consultation (Contd.)								
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L5	HE L6			
Develop strategies for self- development (Contd.)	3b.2.9	Demonstrate the ability to systematically locate, review, evaluate and use research evidence.		x	x			
	3b.2.10	Develop and use protocols for interfacing with other health care providers.		x	x			
	3b.2.11	Demonstrate how to respond to conflicting advice which clients may receive from different sources.		x	x			
	3b.2.12	Explain the importance of presenting a professional environment and manner.			x			
	3b.2.13	Discuss the application of client centered and integrated approaches to dietetic practice and relevance of red flags.			x			
	3b.2.14	Demonstrate, client centered, evidence informed, autonomous, empathetic, and legal dietetic clinical practice.			x			



3b.2 Clinical Practitioner Development and Consultation (Contd.)							
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L5	HE L6		
Develop strategies for self- development (Contd.)	3b.2.15	Collect case data in a sensitive, concise, clear and comprehensible manner, maintain confidentiality of client.			x		
	3b.2.16	Interpret case histories of varying complexity and predictability, using functional dietetic principles and tools, integrating knowledge and understanding from all learning.			x		
	3b.2.17	Justify and accurately communicate clinical decisions made over time for routine, complicated, and unpredictable cases.			x		
	3b.2.18	Explain to the client, negotiate and accurately communicate therapeutic plans (diet, nutraceutical, physical exercise, lifestyle), modifying as appropriate over time.			x		



3b.2 Clinical Practitioner Development and Consultation (Contd.)

Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L5	HE L6
Develop strategies for self- development (Contd.)	3b.2.19	Evaluate clinical encounters over time, using reflective processes to monitor, record and actively enhance the therapy, and own development.			x
	3b.2.20	Demonstrate scope of practice within a framework of knowledge, safety, and fitness to practise.			x
	3b.2.21	Discuss your responsibility for ongoing continuing professional development, training, supervision and mentoring to maintain fitness to practise.			x
	3b.2.22	Demonstrate an understanding of differing research methods and statistical analyses used in research papers and be able to critically evaluate results bearing in mind reported conflict of interest.			x
	3b.2.23	Be able to monitor progress using appropriate information, techniques and measures.			x
	3b.2.24	Demonstrate a clear knowledge of and ability to explain nutritional labelling of foods and how it relates to the client.		x	



3b.3 Clinical Practice Consultation					
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L5	HE L6
To develop dietetic skills to assess and evaluate the client needs and to educate and empower the client.	3b.3.1	To ensure environment is suitable, equipment is ready and client comfortable and safe.		x	
	3b.3.2	Explain the functional dietetic approach to the client and the limitations and potential risks of the therapy.			x
	3b.3.3	Encourage the client to set goals, ask relevant questions, seek advice or express concerns.			x
	3b.3.4	Design and implement appropriate health questionnaire.			x
	3b.3.5	Discuss holism, balance and good health in terms of functional status for the individual and society as a complex adaptive system.			x



3b.3 Clinical Practice Consultation (Contd.)							
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L5	HE L6		
To develop dietetic skills to assess and evaluate the client needs and to educate and empower the client (Contd.)	3b.3.6	Identify possible serious health conditions/red flags and situations where dietetic treatment is not appropriate, and refer appropriately.			x		
	3b.3.7	Explain the importance of negotiating assessment and therapy.			x		
	3b.3.8	Describe strategies to ensure client understanding of their role and responsibilities throughout the therapy process.			x		
	3b.3.9	Critically review effectiveness of therapy using an outcome measure, for example, MYMOP system with the client and make appropriate changes to the protocol with explanation.			x		



3b.3 Clinical Practice Consultation (Contd.)								
Aims	No.	On successful completion of the programme the student will be able to:	SEEC	HE L5	HE L6			
To develop dietetic skills to assess and evaluate the client needs and to educate and empower the client (Contd.)	3b.3.10	Discuss and understand the law regarding disclosure of confidential information to relevant parties when a client puts themselves, or others, at serious risk, for example, through possible infection, violence, suicide or serious criminal act.			x			
	3b.3.11	Understand the legal requirements surrounding notification of other health issues including contagious disease/infection.			X			

The MYMOP2 questionnaire is suggested as a useful tool for use in the evaluation of clinical outcome. The MYMOP questionnaires and user pack can be downloaded from the Framework for measuring impact at this address: <u>http://www.measuringimpact.org/s4-mymop2</u>



KEY LINKS

Dietitians in Integrative and Functional Medicine Institute of Functional Medicine Institute of Systems Biology Linus Pauling Institute Personalized Lifestyle Medicine Institute Santa Fe Institute Complexity Explorer http://integrativerd.org/ https://www.functionalmedicine.org/ http://www.systemsbiology.org/ http://lpi.oregonstate.edu/ http://plminstitute.org/ http://www.santafe.edu/ http://www.complexityexplorer.org/



Appendix I

Transferable skills

The QAA (www.qaa.ac.uk) requires that study skills, often called transferable skills, are embedded in programmes. These are:

- 1. Communicate with others in a clear and articulate manner, using word or number, through written work using appropriate academic conventions.
- 2. Present ideas and arguments verbally in formal presentation and seminars and informal discussions in a variety of environments.
- 3. Work with others in the preparation and presentation of group work and take responsibility for an agreed area of shared activity.
- 4. Negotiate informally with peers and formally with members of organisations.
- 5. Identify and propose solutions to problems both in relation to the substantive area of health studies and for other educational and social issues.
- 6. Recognise issues relating to equal opportunities and identify appropriate action in relation to such issues.
- 7. Use information technology to store, retrieve and produce material for health studies, course work, drawing on skills in the use of word-processing, databases and spreadsheets as appropriate to the task.
- 8. Gather and analyse relevant information from a wide variety of sources using appropriate manual and electronic sources.
- 9. Reflect on and review progress in their own studies and seek assistance or guidance as appropriate in order to enhance their own personal development.



Appendix II - Principles, Practice Framework, Process, Food Reactome

FUNCTIONAL DIETETICS UNDERPINNING PRINCIPLES BIOCHEMICAL INDIVIDUALITY FUNCTIONAL Understanding and appreciating the importance of DIETITIAN variations in metabolic function deriving from Uniquely trained to understand how genetic, epigenetic and nutrients and other food components environmental differences influence the function of the body, among individuals. protect against disease, restore health, and determine people's response to changes in the PATIENT CENTRED environment. Recognition of the evidence that supports a patientcentred rather than a disease-centred approach to treatment. One-size-fits-all is not appropriate in the personal genome era. WEB-LIKE PROMOTION OF DYNAMIC BALANCE INTERACTIONS ORGAN RESERVE OF INTERNAL AND Human physiology functions as As the means to enhance EXTERNAL FACTORS an orchestrated network of health span by maintaining Understanding that resilient homeostasis (the buffering

interconnected systems, rather genomic stability and than individual systems functioning autonomously and decreasing morbidit y. without effect on each other.

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mitochondrial capacity so

HEALTH

Health is an individual's metabolic flexibility and capacity to adapt physically, cognitively and socially to continuing changes in the environment to maintain complete well-being and not merely the absence of disease or infirmity. References

capacity to respond to a

physiological equilibrium.

perturbation) is important for

Huber M., Knottnerus J., Green L., et al. How should we define health? BMJ. 2011;343:d4163
 Van Ommon B., Van Der Greef J., Ordows J., Dariel H. Phanotypic fissibility as key factor in the human rulation and health relationship. Ganes & Nutrition. 2014;9(5):423
 World Health Organization 1948



NUTRITION AND HEALTH PRACTICE FRAMEWORK

DRIVERS FOR PERSONALISED NUTRITION (P4)

PREDICTIVE PREVENTIVE PERSONALISED PARTICIPATORY Peak performance
General well-being / anti-ageing
Family history / targeted risk-reduction
High risk occupation / environment
Poor response to treatment

GENETIC PROFILING

PHENOTYPE ASSESSMENT

ifelona

iterative

process

Broad or targeted

Broad or targeted biomarker or functional assessment

PERSONALISED NUTRITION AND LIFESTYLE ADVICE (including risk assessment)

PHENOTYPE ASSESSMENT

Digestion / Absorbption and microbiological markers. Cardio / Circulatory markers. Inflammatory / Immune markers. Redox balance + Oxidative stress + Mitochondrial function. Detox / Biotransformation / Excretory function. Hormones and neurotransmitters.

> Transgenerational epigenetic inheritance. Nutrition and environment in utero. Dynamical interactions from small or large perturbations, eg: stress, medications, gene transcription changes / epigenetic modifications, CLOCK mechanisms, age-glycosylation, nitrosative / oxidative stress, oral and gut microbiology.

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