APPENDIX A - PROGRAMME SPECIFICATION AND CURRICULUM MAP FOR BSC (HONS) NUTRITIONAL SCIENCE

1. Programme title	BSc (Hons) Nutritional Science
2. Awarding institution	Middlesex University
3. Teaching institution	Centre for Nutrition Education & Lifestyle Management. CNELM
4. Programme accredited by	
5. Final qualification	BSc (Hons) Nutritional Science
6. Academic year	2015/2016
7. Language of study	English
8. Mode of study	Distance Learning Full time/Part time.

9. Criteria for admission to the programme

Applications are welcomed from mature students and school leavers. All students are interviewed prior to being offered a place on the course.

We wish to recruit applicants with a keen interest in nutritional science. Successful applicants will generally meet the criteria below:

Two 'A' levels grades A-C in Human Biology and Chemistry or similar subjects.

Equivalents to 'A' level also accepted

CNELM's Bioscience Entry modules in Chemistry and Human Biology grades A-C

'A' levels or equivalent accepted within a 5-year currency or applicants demonstrating current use of knowledge in the workplace.

CNELM's Bioscience Access modules can be taken as a Refresher course.

GCSE in mathematics, or equivalent, or CNELM's Maths Foundation module

GCSE English Language or equivalent

IELT's 6.0 or TOEFL equivalent is the standard requirement for applicants where English is not their first language; or evidence of having completed courses equivalent to level 3 in the English language.

The ability to use IT facilities including word processing, internet browsing and use of email.

Applicants applying to take this course in conjunction with the CNELM Nutritional Therapy Practice Diploma must demonstrate 'Fitness to Practice'. Evidence of prior certificated learning may enable applicants to join the programme at an advanced standing.

10. Aims of the programme

The programme aims to:

Provide graduates with the skills to think critically and creatively, encourage enterprise, entrepreneur and intrapreneurship and meaningfully contribute to the nutrition industry in a variety of roles, including: research; teaching; health writing; technical positions for product companies, laboratories and nutrition organisations and agencies; working towards leadership roles to manage community projects. Students will have been given opportunity to build knowledge and skills to effectively evaluate the safety and ethical context of nutritional interventions and able to reason critically to justify solutions to address multi-faceted problems from public health issues affecting communities; the challenges to the food industry to provide products to support health, through to; supporting individuals with bespoke solutions. The programme aims to support students in developing the ability to undertake and critique research to enhance the evidence base for the efficacy of nutritional interventions that supports the development of the nutrition profession. Graduates should be reflexive with the ability to objectively assess their own learning and development needs and put in place appropriate action plans to ensure continued professional growth. Developing team working and leadership skills aims to prepare students for joining a dynamic, globally interconnected workplace.

11. Programme outcomes

A. Knowledge and understanding

On completion of this programme the successful student will have knowledge and understanding of :

1. The biochemistry and physiology of the human system and how food and its nutritional components interact with the human organism.
2. The cellular, molecular, genetic and genomic basis of disease to justify the design of nutritional intervention programmes.
3. The safety of nutritional products as 'food' or pharmacological agents, in a variety of contexts including drug/nutrient interactions.
4. International and national guidelines for nutrition and health, the strengths and weaknesses of these guidelines. The challenges confronting the nutrition industry and the roles of legislation, regulation and professional representation and lobbying.
5. The complexity of the human system and how this relates to strengths and weaknesses of research methods as applied to human populations and the difference between research evidence and clinical experience.
6. The relative strengths and weaknesses of different medical paradigms and models of health care. Including the appraisal of a range of laboratory and clinical investigations, both orthodox and complementary, and their potential value as tools for preventing disease and optimising health.
7. Impact of different social, political, cultural, economic and environmental influences on the health of local and global communities and process of innovation, leadership and change.

Teaching/learning methods

Students gain knowledge and understanding through: Accessing lecture content on the VLE; completing online activities associated with lecture content; online tutorials; one to one appraisal; reading; discussion, forum and joining online 'live' sessions; clinical laboratory work; observation; demonstrations; group work; interviews; presentations; role-play, video and 'live' educator consultations.

Assessment Method

Students' knowledge and understanding is assessed by:

Written assignments; essays, short questions; dietary analysis.

- Online quizzes
- Laboratory analysis; reports; creation of a range of different styles of literature for different audiences
- Online Presentations
- Demonstrations
- Group Work via online collaboration
- Online tests
- Role play using online meeting.
- One to one review, learning contracts,
- Examinations
- Dissertation

B. Cognitive (thinking) skills

On completion of this programme the successful student will be able to:

1. Contextualise analysed diet data taking into account a range of social/cultural, economic and political influences to assist individuals through the process of diet and lifestyle change.
2. Discern between appropriate and non-appropriate dissemination of public information on food and health and act in a manner that protects and supports the growth of the nutrition profession.
3. Identify and evaluate the difficulties of applying sound nutrition programmes within a world of scientific uncertainty.
4. Positively influence: Government, industry, the public and individuals towards adopting a sustainable health culture.
5. Effectively use clinical evidence and scientific research to present, challenge and defend strong arguments taking into account principles of non-linearity and complexity science as it relates to human biochemistry, physiology, pathology, and health cultures.
6. Effectively use models of reflection and reflexivity to challenge own views and support an independent drive for growth and learning in self and others.

Teaching/learning methods

Students learn cognitive skills through:
problem solving activities; observation; discussion, both live interactive and on student forums; research; group work; case studies; feedback; reflection and role play using online meeting tools.

Assessment Method

Students' cognitive skills are assessed by:

Coursework
Examinations
Learning contracts
Reports
Research exercises and projects
Online presentations including question and answer sessions.

C. Practical skills

On completion of the programme the successful student will be able to:

Teaching/learning methods

Students learn practical skills through:

1. Inform and educate individuals and groups within a variety of social, ethical and cultural contexts towards better nutrition and lifestyle choices verbally and in writing. 2. Evaluate specific challenges confronting the health foods/products industry, Utilise styles of leadership flexibly to offer direction and facilitate change. 3. Use scientific data to support the use of laboratory and clinical assessments and nutritional and herbal products in optimising health and disease prevention. 4. Use digital literacy skills to locate and critically evaluate salient research both in the field of nutrition and within other topics of interest to support the further development of the evidence base for the efficacy of nutritional interventions at both public health and individual levels 5. Effectively present own work and ideas and be able to enter professional debate to explore and challenge own ideas and those of others. 6. Apply statistical techniques to analyse data and be able to give meaning to statistical data. 7. Identify a range of social, cultural, ethical, economic and political influences on health within communities and develop appropriate strategies to support communities improve health outcomes.	Demonstration Presentations Observation Group work Role play Feedback. **Assessment Method** Students' practical skills are assessed by Coursework (written and practical), educator role plays, feedback, writing literature for a range of audiences, presentations, data analysis, independent and group research.
D. Graduate Skills On completion of this programme the successful student will be able to: 1. Communicate effectively using a variety of media to a range of audiences. 2. Utilise interpersonal skills to negotiate the role(s) they will take in a team or project. 3. Identify personal and professional goals and create effective action plans to achieve stated goals. 4. Use reflection as a developmental tool to support continuing self-directed development of knowledge and skills. 5. Competently use a range of I.T. resources. 6. Competently apply numeracy skills for a range of purposes. 7. Evaluate problems and implement appropriate problem solving techniques/strategies to resolve.	**Teaching/learning methods** Students acquire graduate skills through: Coursework Group work Role plays Presentations Discussion and debate Feedback Creation of literature Data analysis Independent research Learning Contracts Reflection Career planning exercises. **Assessment method** Students' graduate skills are assessed through written and practical assignments.

12. Programme structure (levels, modules, credits and progression requirements)

12. 1 Overall structure of the programme

The BSc (Hons) in Nutritional Science is a single honours distance learning programme offered in Full and Part-Time modes. The Full-Time programme is delivered in 15 modules spread over three years, three terms per year. For students completing the programme on a part-time basis an individual programme is agreed with the student that will take into account progression requirements. Students will complete 120 credits at each undergraduate level. A student may change their mode of study or interrupt their studies for an agreed set period of time without adverse effect on the grade or credit value of any completed assignment. If a student interrupts their studies for more than one year they may be required to review modules previously completed. The programme is structured over three levels to develop the knowledge and skills required to join the nutrition industry, and to enable life-long and independent learning. Key skills are developed throughout the course. The programme is structured to integrate theory and practice in a variety of situations and settings and to allow students more than one attempt to attain academic success. Research mindedness is introduced during level 4 and developed throughout level 5 and 6.

12.2 Levels and modules .		
Level 4		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
Students must take all of the following: CND411 Thinking Critically CND412 Nutritional Biochemistry CND413 Public Health Nutrition CND431 Applied Physiology CND432 Dietary Communication	None:	In order to progress students are required to have successfully completed all modules at 40% or above. Progression to specific level 5 modules may be interrupted if prerequisite modules have not been passed.
Level 5		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
CND511 Applied Pathophysiological Reasoning CND512 Food Science & Safety CND513 Research Methods CND531 Nutraceuticals & Pharmaceuticals CND532 Nutrition in Practice	None:	In order to progress students are required to have successfully completed all modules at 40% or above. Progression to specific level 5 modules may be interrupted if prerequisite modules have not been passed.
Level 6		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
CND 611 Personalised Nutrition Interventions CND 612 Health Culture CND 621 Herbal Products CND 622 Research Project CND 631 Nutrition Business Enterprise		In order to graduate from the Programme students are required to have successfully completed all modules at 40% or above. Students also need to have met the attendance requirements outlined in the Programme Handbook

12.3 Non-compensatable modules (note statement in 12.2 regarding FHEQ levels)	
Module level	***Module code***
	NONE

13. A curriculum map relating learning outcomes to modules

See Curriculum Map attached

14. Information about assessment regulations

All components of a module must be passed with a grade of 16 (40%) or higher. The final marks awarded for examination and or coursework for each module is detailed in the relevant Module page on the VLE.

Self deferral is **NOT** permitted. In order to progress through the Programme, students must engage regularly with the content and learning activities on the virtual learning environment (VLE).

15. Placement opportunities, requirements and support (if applicable)

This programme aims to develop innovative skills to support future careers. This programme does not include work placement on-site with a company. It does include 50 hours of online Work Experience as part of Level 5 Nutrition in Practice. Work experience may be commissioned by company such as product design and monographs for a disease state or natural product or information leaflets on laboratory assessments; writing articles for journals, creating nutritious recipes and analysing menus for food outlets. Students may engage in entrepreneurial work opportunities independently or as part of groups to develop an online one-day seminar for the public or professionals on a specific topic or an online food demonstration. Students will be encouraged to expand their vision regarding work opportunities in a world of global interconnectedness.

16. Future careers (if applicable)

This programme primarily prepares students for joining the nutrition industry including: product companies and investigative laboratories; the food industry, governmental and non-governmental organisations, overseas work, nutrition practice, community work, research and academia. Research roles in the food, pharmaceutical and nutraceutical industries. Leadership and management roles in local community health projects. Marketing and promotional roles in health education. Writing, teaching and presenting on food and health. If students wish to practice as a Nutritional Therapist, this programme can be combined with the CNELM Nutritional Therapy Practice Diploma which is an NTEC approved route to Nutritional Therapy Practice. Graduates may also apply to one of the UK colleges offering further postgraduate dietetic studies. Places are competitive and a place cannot be guaranteed.

17. Particular support for learning (if applicable)

Access to CNELM online learning resources,
Online access to the RSM resources including :search engines e-books, e-journals and videos
Science Direct journals and books
PDF of key texts from the Institute of Functional Medicine.
Royal Society of Arts Journal, videos and other resources (open access online)
Natural Medicines and the Natural Standard Databases
Health Food Manufacturer's Association online resources
The Nutrition Practitioner journal
English language and mathematics support and support for students with disabilities
British Library , Royal Society of Medicine RSM library and the Nutri Centre library

Module leaders
Session lecturers
Programme Leader
Coach Mentor Support (by referral only)
Professional Mentor from level 4 -6 to support students identify and achieve career objectives
Student Support Manager
IT and Administrative Support
Access to Link Tutor and other relevant MU contacts

18. JACS code (or other relevant coding system)	B400
19. Relevant QAA subject benchmark group(s)	Biosciences

20. Reference points

The following reference points were used in designing the programme:

- UK Quality Code for Higher Education online 2013/14
- QAA Benchmarks statements for Biosciences 2007, Biomedical Sciences, Healthcare Programmes and Dietetics 2004, health studies 2008
- QAA Enterprise and Entrepreneurship Education: Guidance for UK Higher Education Providers September 2012

- NTEC Core Curriculum for Nutritional Therapy 2007
- Skills for Health National Occupational Standards for Nutritional Therapy 2010
- Middlesex University Learning and Quality Enhancement Online Handbook 2013/14
- Middlesex University Online Regulations 2013/14
- Higher Education Academy Preparing Students for a Global Future Aug 2014
- SEEC Credit Level Descriptors (Levels 4-6) 2010
- Blooms and Solo Taxonomy online 2013/14

21. Other information

Not applicable

Please note programme specifications provide a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve if s/he takes full advantage of the learning opportunities that are provided. More detailed information about the programme can be found in the student programme handbook and the University Regulations.

Curriculum map for BSc (Hons) Nutritional Science

	Programme outcomes																								
A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	C5	C6	C7	C1	C2	C3	C4	C5	C6	C7
	Highest level achieved by all graduates																									
	L6																									
D1	D2	D3	D4	D5	D6	D7																				
	Highest level achieved by all graduates																									
	L6																									

This section shows the highest level at which programme outcomes are to be achieved by all graduates, and maps programme learning outcomes against the modules in which they are assessed.

Programme learning outcomes

Knowledge and understanding		Practical skills	
A1	The biochemistry and physiology of the human system and how food and its nutritional components interact with the human organism	C1	Inform and educate individuals and groups within a variety of social, ethical and cultural contexts towards better nutrition and lifestyle choices verbally and in writing.
A2	The cellular, molecular, genetic and genomic basis of disease to justify the design of nutritional intervention programmes.	C2	Evaluate specific challenges confronting the health foods/products industry, Utilise styles of leadership flexibly to offer direction and facilitate change.
A3	The safety of nutritional products as 'food' or pharmacological agents, in a variety of contexts including drug/nutrient interactions.	C3	Use scientific data to support the use of laboratory and clinical assessments and nutritional and herbal products in optimising health and disease prevention.
A4	International and national guidelines for nutrition and health, the strengths and weaknesses of these guidelines. The challenges confronting the nutrition industry and the roles of legislation, regulation and professional representation and lobbying.	C4	Use digital literacy skills to locate and critically evaluate salient research both in the field of nutrition and within other topics of interest to support the further development of the evidence base for the efficacy of nutritional interventions at both public health and individual levels
A5	The complexity of the human system and how this relates to strengths and weaknesses of research methods as applied to human populations and the difference between research evidence and clinical experience.	C5	Effectively present own work and ideas and be able to enter professional debate to explore and challenge own ideas and those of others.
A6	The relative strengths and weaknesses of different medical paradigms and models of health care. Including the appraisal of a range of laboratory and clinical investigations, both orthodox and complementary, and their potential value as tools for preventing disease and optimising health.	C6	Apply statistical techniques to analyse data and be able to give meaning to statistical data.
A7	Impact of different social, political, cultural, economic and environmental influences on the health of local and global communities and process of innovation, leadership and change.	C7	Identify a range of social, cultural, ethical, economic and political influences on health within communities and develop appropriate strategies to support communities improve health outcomes.

Cognitive Skills		Graduate Skills	
B1	Contextualise analysed diet data taking into account a range of social/cultural, economic and political influences to assist individuals through the process of diet and lifestyle change.	D1	Communicate effectively using a variety of media to a range of audiences.
B2	Discern between appropriate and non-appropriate dissemination of public information on food and health and act in a manner that protects and supports the growth of the nutrition profession.	D2	Utilise interpersonal skills to negotiate the role(s) they will take in a team or project.
B3	Identify and evaluate the difficulties of applying sound nutrition programmes within a world of scientific uncertainty.	D3	Identify personal and professional goals and create effective action plans to achieve stated goals.
B4	Positively influence: Government, industry, the public and individuals towards adopting a sustainable health culture.	D4	Use reflection as a developmental tool to support continuing self-directed development of knowledge and skills.
B5	Effectively use clinical evidence and scientific research to present, challenge and defend strong arguments taking into account principles of non-linearity and complexity science as it relates to human biochemistry, physiology, pathology, and health cultures.	D5	Competently use a range of I.T. resources.
B6	Effectively use models of reflection and reflexivity to challenge own views and support an independent drive for growth and learning in self and others.	D6	Competently apply numeracy skills for a range of purposes
		D7	Evaluate problems and implement appropriate problem solving techniques/strategies to resolve.

Module Title	Module Code	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	C5	C6	C7	D1	D2	D3	D4	D5	D6	D7
Thinking Critically	CND411					Y					Y		Y					Y				Y		Y	Y	Y	Y	Y
Nutritional Biochemistry	CND412	Y																	Y	Y		Y	Y		Y	Y	Y	Y
Public Health Nutrition	CND413				Y			Y	Y			Y						Y				Y	Y	Y	Y	Y	Y	Y
Applied Physiology	CND431	Y											Y						Y	Y		Y	Y		Y	Y	Y	Y
Dietary Education	CND432		Y		Y			Y	Y	Y		Y		Y	Y			Y				Y	Y	Y	Y	Y	Y	Y
APR	CND511	Y	Y			Y	Y			Y	Y		Y				Y	Y	Y			Y	Y		Y	Y	Y	Y
Food Science & Safety	CND512	Y		Y				Y		Y		Y				Y		Y	Y	Y		Y	Y		Y	Y	Y	Y
Research Methods	CND513					Y					Y		Y					Y	Y	Y		Y			Y	Y	Y	Y
Nutra & Pharmaceuticals	CND531	Y	Y	Y	Y					Y		Y	Y	Y			Y	Y	Y	Y		Y	Y		Y	Y	Y	Y
Nutrition in Practice	CND532				Y			Y	Y	Y	Y	Y		Y		Y			Y		Y	Y	Y	Y	Y	Y	Y	Y
Pers. Nutrition Interventions	CND611	Y	Y	Y		Y	Y		Y		Y		Y				Y	Y	Y		Y	Y	Y		Y	Y	Y	Y
Health Culture	CND612				Y			Y	Y	Y		Y		Y	Y			Y	Y	Y	Y	Y	Y		Y	Y	Y	Y
Herbal Products	CND621	Y		Y	Y					Y			Y				Y			Y		Y			Y	Y	Y	Y
Research Project	CND622		Y			Y					Y		Y				Y	Y	Y	Y		Y	Y		Y	Y	Y	Y
Nutrition Enterprise	CND631						Y	Y	Y	Y		Y		Y		Y					Y	Y	Y	Y	Y	Y	Y	Y