

MSc in Nutrition and Lifestyle Medicine Module List

Module Code	Title	Description
MScNLM Core Modules		
NLM5001	Precision Nutrition	This course introduces the emerging field of precision nutrition, which examines how individual differences in genes, metabolism, and gut microbiota influence dietary responses and health outcomes. Students will explore key concepts in nutrigenetics, metabolomics, and the gut-brain axis, and learn how these insights inform personalised dietary strategies. Emphasising a whole-food, plant-forward approach, the module integrates current scientific evidence with culturally relevant nutrition practices. By bridging biological mechanisms with real-world applications, students will develop an understanding of how precision nutrition can support optimal health, disease prevention, and sustainable lifestyle change.
NLM5002	Fundamentals of Lifestyle Medicine	This module introduces the foundational principles and evidence-based practices of lifestyle medicine. Students will examine how core lifestyle factors such as nutrition, physical activity, stress management, sleep, and social connection affect health and disease prevention. Through scientific evidence and case discussions, the course highlights how daily habits can prevent, manage, and sometimes reverse chronic conditions. Emphasis is placed on understanding and interpreting research findings rather than complex data analysis, equipping students to critically evaluate evidence and apply lifestyle medicine strategies in real-world settings. By integrating multidisciplinary perspectives, students will gain practical skills to promote holistic health and wellbeing.
NLM5003	Nutrition Across the Life Course	This module provides students with foundational knowledge of human nutrition and its impact on health across different stages of life. It covers the essential nutrients including carbohydrates, proteins, fats, vitamins, and minerals, and their roles in growth, development, and disease prevention. Students will examine nutritional requirements from infancy through older adulthood, including the effects of undernutrition, overnutrition, and dietary imbalances. Emphasis is placed on understanding how biological, social, and cultural factors influence dietary needs and food choices throughout the life course. The module prepares students to apply nutrition principles in promoting lifelong health and wellbeing.
NLM5004A	Capstone Project I	Capstone Project I offers students in the Master of Science in Nutrition and Lifestyle Medicine programme the opportunity to identify a host organisation and preceptor, develop their project scope, and gain hands-on experience in their area of interest. Students collaborate with their preceptor to undertake a novel project relevant to their MSc journey, culminating in a final presentation of their work.
NLM5004B	Capstone Project II	Capstone Project II is the culmination of the Master of Science in Nutrition and Lifestyle Medicine programme, where students finalise and present their capstone projects developed in Capstone Project I. Working closely with their host organisation and preceptor, students showcase their research and findings in a culminating presentation to the Nutrition and Lifestyle Medicine department.

MscNLM Elective Modules		
NLM5005	Culinary Medicine: From the Bench to the Plate	This course merges nutrition science with culinary arts, emphasising the "Food is Medicine" philosophy. Through interactive teaching kitchens, students learn healthy cooking techniques and explore medically tailored meals for specific health conditions. Developing basic culinary skills, students promote healthier eating habits, bridging the gap between nutrition knowledge and practical culinary application.
NLM5006	Exercise as Medicine: Bridging Research and Practice	This module explores the role of exercise in preventing and managing chronic disease, optimising health, promoting longevity, and enhancing mental wellbeing. Students will learn how physical activity can be used as a therapeutic tool across different populations and settings. Through engagement with research evidence and practical tools such as fitness assessments, screening measures, and wearable technologies, students will develop the skills to design and evaluate tailored exercise interventions that improve individual and population health outcomes.
NLM5007	Advanced Lifestyle Medicine for Healthy Ageing	This module advances students' understanding of lifestyle medicine by focusing on its application to healthy ageing and longevity. It explores the interplay between biological ageing processes, lifestyle behaviours, and chronic disease trajectories. Students will critically evaluate current research on nutrition, physical activity, sleep, stress, and social connection in extending healthspan and improving quality of life in older adults. The module emphasises translating evidence into personalised and population-level interventions, integrating approaches from behavioural science, gerontology, and preventive medicine. Through case analyses and applied projects, students will design practical strategies that support resilience, vitality, and wellbeing across the ageing continuum.
NLM5008	Nutrition, Lifestyle, and Intergenerational Impacts	This course delves into the intricate relationship between nutrition, lifestyle, and intergenerational health impacts. Students explore prenatal nutrition's influence on fetal development and delve into epigenetics, early childhood nutrition, and health disparities. Emphasis is placed on intergenerational health promotion strategies aimed at breaking cycles of poor health, offering insights into fostering lifelong wellness across generations.
NLM5009	Sleep, Stress, and Mental Health	This course delves into the intricate connections between sleep, stress, and mental health. Students explore mindfulness techniques for stress reduction, mental health epidemiology, and strategies for assessing wellbeing. Emphasis is placed on understanding the impact of stress on health outcomes, incorporating mindful eating practices, and developing life skills such as resilience and emotional regulation to enhance overall emotional wellbeing.

School of Public Health (SPH) Elective List for Cross-Registration*

Module Code	Title	Description
SPH5202	Control of Non-Communicable Diseases	This course showcases the application of epidemiology to the study of non-communicable diseases. We will cover how epidemiological principles and methods inform our understanding of the burden and determinants of some major non-

		communicable diseases as well as the choice of the most appropriate strategies at each level of prevention, with an emphasis on primary prevention.
SPH5408	Public Health and Ageing	In this course, an overview of the ageing population and its increasing relevance for public health planning and policy, both in Singapore and internationally. Major topics include demography of ageing, normal (physiological and biological) and abnormal (physical and mental) ageing, prevention of ageing-related diseases and compression of morbidity, health and social services and policies for older persons, and medico-legal and ethical issues of care for the older persons. Students will learn how to apply their knowledge to critically appraise health and social programmes and policies for older persons and apply medico-legal and ethical principles in the care for older persons.
SPH5413	Women's, Children's and Adolescents' Health	Investing in the health of women, children and adolescents is critical for every nation's development. The course applies a life-course perspective to critically explore the issues affecting the health of mothers, young children and adolescents. We will examine the socioeconomic, behavioural and political determinants of maternal, child and adolescent health, as well as policies, programs and services to reach them. The challenges, strategies and potential innovations to more effectively improve their health and wellbeing will be a major focus. These will be linked to global efforts towards achieving the Sustainable Development Goals (SDGs) related to health and well-being, education, gender equity, and poverty reduction.
SPH5417	Fundamentals of Population Health	Population Health is a distinguishing domain within the field of public health, which focuses on the greater social determinants and drivers of health. In understanding Population Health, one takes a systems-approach in examining the socioeconomic factors and the physical environment that influence the health and wellness for the whole of population, going beyond individualised medical healthcare for the sick. Population Health takes a broader societal view and more of a multi-disciplinary approach than the other public health domains. This course will build up the fundamental theoretical concepts and knowledge base for how to improve the health of the population.
SPH5418	Public Health Policy: A Systems Approach	In today's dynamic public health landscape, practitioners must be adept at viewing public health challenges through a systems lens, recognising the interconnections and feedback loops inherent in policy design, execution and evaluation. This course offers an immersive exploration of current public health policies, uniquely weaving in the principles of systems thinking to equip students with both theoretical insights and practical tools. The course prepares students to lead with agility, ensuring they can both shape and respond to the ever-evolving demands of Public Health policy with a comprehensive, systems-oriented perspective.

Food Science and Technology (FST) Elective List for Cross-Registration*

Module Code	Title	Description
FST5301A	Scientific Principles of Nutraceuticals	This course introduces oxidative stress and chronic inflammation as causative factors of chronic diseases in the context of how food constituents may act as dietary antioxidants and anti-inflammatory agents in mitigating the negative effects of oxidative stress and inflammation on development of chronic diseases such as type II diabetes, cardiovascular diseases, cancer, and ageing. It discusses the chemical and biological mechanisms of the phytochemicals underpin their purported health promotion effects. It analyses the scopes and limitations of various research methods applied for establishment of scientific evidence as well as the global regulatory policies for health claims of functional foods.
FST5302	Food, Nutrition, and Health	Food Science and Technology has been instrumental in the advancement and production of safe and nutritious food and food products. While food is essential for life, the influence of food composition on health includes not only macro- and micro-nutrients but also other components such as flavonoids, sweeteners and additives. The nutritional requirement at different life stages will also be discussed. This course is targeted at students who do not have a background in nutrition but currently work, or plan to work, in the food industry.

FST5303A	Science in Clinical Nutrition	This course informs students in the scientific basis which underlies new dietary strategies to manage health and diseases. The interplay between an individual's disease status, microbiome and neuro-physiological state with the diet is investigated and their impact on our general health and susceptibility to diseases at the population and individual level is discussed. Other emerging topics in advanced nutritional research, chrono-nutrition, dietary restriction and design of personalized foods and diet, is also covered.
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**Students may cross register up to 2 Electives from FST or SPH*