

Foundational Systems Definitions

A **system** is a group of organs or functional collections of tissue that work together to maintain homeostasis. A system does not work in isolation, and the well-being of the person depends upon the well-being of all the interacting systems.

The foundational systems definitions were developed by the Curriculum Management Unit, in consultation with:

- Curriculum Renewal Project Development Committee
- All regional Curriculum Transition Teams
- System Integration Lead and the System Leads

The definitions were endorsed by the Curriculum Renewal Project Steering Committee.

For further information, please contact Dr. Adrian Yee, Director of Curriculum at adrian.yee@ubc.ca.

Foundational System	System Lead Name	System Lead Email	Definitions
Behavioural System	Clare Beasley	clare.beasley@ubc.ca	The mental processes such as cognition, emotion, temperament, motivation; and bio-behavioral interactions.
Blood and Lymphatics System	Kate Chipperfield Leslie Zypchen	Kate.Chipperfield@cw.bc.ca lzypchen@bccancer.bc.ca	The system composed of organs and tissues that form blood and transport immune cells, red blood cells, and lymph.
Cardiovascular System	Jonathan Tang	jonathantang@uvic.ca	The system composed of the heart and the blood vessels.
Digestive System	Alan Yau Chad Evaschesen	yualan@mail.ubc.ca chad.evaschesen@ubc.ca	The system composed of the organs stretching from the mouth to the anus, serving to break down foods, assimilate nutrients, and eliminate waste. *Note: includes nutrition, liver, and exocrine pancreas*
Endocrine System	Mohammed Almehtel	Mohammed.AlMehthel@vch.ca	The system of glands that release hormones directly into the circulatory system.

Foundational System	System Lead Name	System Lead Email	Definitions
Growth and Development System	Dina Panagiotopoulos	dpanagiotopoulos@cw.bc.ca	The continuous sequential physical, physiological and psychological maturation of an individual.
Immune System	Mary Kestler Kyla Hildebrand	Mary.Kestler@cw.bc.ca Kyla.Hildebrand@cw.bc.ca	The system composed of the body's defense mechanism against foreign organisms or substances. *Note: includes infectious disease and medical microbiology (IDMM)*
Integument System	Lui Harvey	harvey.lui@ubc.ca	The system composed of the skin and the skin appendages.
Musculoskeletal System	Paul Clarkson Rhonda Shuckett	pclarkson@bccancer.bc.ca rhoshu@telus.net	The system composed of the muscles, bones, and cartilage of the body.
Nervous System	Laura Wilson	laura.wilson@ubc.ca	The system composed of the brain, spinal cord, cranial and spinal nerves, autonomic ganglia, and plexuses.
Reproductive System	Christopher Ng Brian Mayson	chrng@alumni.ubc.ca BMayson@providencehealth.bc.ca	The system composed of the organs involved in reproduction. *Note: includes mammary glands*
Respiratory System	John Fleetham	john.fleetham@vch.ca	The system composed of the tubular and cavernous organs and structures for pulmonary ventilation and gas exchange.
Urinary System	Suneet Singh Brian Mayson	Suneet.Singh@vch.ca BMayson@providencehealth.bc.ca	The system composed of the organs involved in the formation, release, and excretion of urine.

Themes Definitions

Themes are specific areas or categories of knowledge, skills, and attitudes that support undergraduate medical education at UBC. They are supported and addressed by a focus in the curriculum over all 4 years, as appropriate. Themes are championed by Theme Leads. Themes cover areas of medical education that require a focus and a developmental approach to understanding over all 4 years, where applicable. Some Themes are topics (e.g. Pathology), others are approaches (e.g. Health Advocacy and Social Determinants of Health), while others address particular patient populations that have been identified as requiring particular attention at this time (e.g. Geriatrics). It is the foundational nature of a Theme coupled with the importance of taking a developmental approach to the Theme that highlight the need for creating a Theme to address a particular area.

Note: Themes are not medical specialties or practice areas. A given specialty or practice area could include a number of Themes. For example, study and practice of oncology could include content from Pathology, Diagnostic Imaging, Surgery, and Pharmacotherapy Themes. Similarly, study and practice of genetics could include Theme content from Genetics and Genomics, and Medical Ethics Themes. All Themes are tracked throughout the curriculum to support accreditation.

See subsequent pages for definitions of each theme.

For further information, please contact Dr. Adrian Yee, Director of Curriculum at adrian.yee@ubc.ca.

Theme Name	Theme Lead	Theme Lead Email	Definition
Anatomy and Embryology	Majid Doroudi	mdoroudi@mail.ubc.ca	The study of the origin, growth, and development of a human embryo and the relationship between the structure and function of organs and tissues.
Biochemistry and Molecular Biology	Leonard Foster (Interim)	foster@msl.ubc.ca	The study of the molecular basis of biological activities, their effect and chemistry on the normal and abnormal biological processes.
Clinical Diagnosis	Ian Scott	ian.scott@familymed.ubc.ca	The clinical determination of the nature of a disease or condition; distinguishing of one disease or condition from another. Assessment may be made through history, physical examination, laboratory tests, or computerized programs to enhance the decision-making process.

Theme Name	Theme Lead	Theme Lead Email	Definition
Complementary and Alternative Therapies	Lawrence Cheng Ashley Riskin Dana Hubler	lcheng@connecthealthcare.ca ariskin@connecthealthcare.ca Dana.Hubler@ubc.ca	The use of therapeutic practices which are not currently considered an integral part of conventional allopathic medical practice. <i>Note: Complementary when used in addition to conventional treatment and Alternative when used instead of conventional treatment.</i>
Diagnostic Imaging	Kathryn Darras Savvas Nicolaou	Kathryn.darras@ubc.ca savvas.nicolaou@vch.ca	The use of a variety of imaging modalities to display the structural or functional patterns of organs or tissues of the human body for diagnostic and therapeutic purposes.
Virtual Care and Informatics	John Pawlovich	jpaw@mail.ubc.ca	The provision of care that is informed and supported by information science that includes the analysis and dissemination of patient and treatment data through the application of computers and other electronic resources.
Evidence Based Medicine and Scholarship	Martin Schechter Brian Ng Trina Fyfe	martin.schechter@ubc.ca brian.ng@ubc.ca fyfet@unbc.ca	The provision of care and practice demonstrating a reflective lifelong commitment to excellence through continuous learning, teaching others, generating scholarship, and evaluating and integrating the best evidence to guide clinical care.
Exercise	Ron Wilson	Ronald.Wilson@ubc.ca	The use of physical activity in health promotion and treatment of disease.
Family Practice, Primary Care	Margaret Manville	fmdir@uvic.ca	Care which provides integrated, accessible essential health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community, including in rural or underserved areas, and integrating care with consultant specialists or allied health care professionals.

Foundational Systems & Themes Definitions

Theme Name	Theme Lead	Theme Lead Email	Definition
Genetics and Genomics	Michelle Steinraths Jane Gair	michelle.steinraths@viha.ca jgair@uvic.ca	The study of genes, their function, and the heredity and mechanisms by which genetic factors are transmitted from one generation to the next. <i>Note: For diagnosis, treatment and prevention use the appropriate Cluster/Theme.</i>
Global Health	Videsh Kapoor	vkapoor@mail.ubc.ca	The activities (study, research, and practice) that place a priority on improving health and achieving equity in health for all people worldwide. Emphasizes transnational health issues, determinants, and solutions; involves many disciplines within and beyond the health sciences and promotes interdisciplinary collaboration; and is a synthesis of population-based prevention with individual-level clinical care.
Health Advocacy and Social Determinants of Health	Maria Hubinette	maria.hubinette@ubc.ca	The activities taken to collaboratively work with individual patients, communities and populations to advance their health and well-being with the understanding that health is largely shaped by living conditions (social determinants of health), and less by medical care or individual lifestyle choices. The actions taken by a physician on behalf of the individual patients and the advocacy to improve the functioning of the health care system.
Histology	Karen Pinder	Karen.pinder@ubc.ca	The study of the microscopic anatomy of humans and the relationship between the normal structure and function of cells, tissues, and organs.



Foundational Systems & Themes Definitions

Theme Name	Theme Lead	Theme Lead Email	Definition
Interprofessional Collaboration	Sue Murphy	Sue.Murphy@ubc.ca	The provision of care that is informed and supported by inter-professional communication and decision making that enables the separate and shared knowledge and skills of health care providers and patients/families to synergistically achieve positive health outcomes. Inter-professional practice and shared decision making involve an active and authentic partnership between a team of health care providers and a client / family in a participatory, collaborative and coordinated fashion.
Laboratory Diagnosis	Mike Nimmo	michael.nimmo@vch.ca	The use of diagnostic tests in clinical chemistry, pathology, hematology, microbiology, and other general clinical laboratory applications for the diagnosis and treatment of disease.
Leadership and Health System Improvement	Malcolm Maclurelan Thompson	Malcolm.Maclure@ubc.ca ianbthompson@uvic.ca	The provision of skills to support students taking an appropriate leadership role in analyzing a problem, defining a direction and aligning people with a vision. This includes the ability to analyze and make recommendations on how to improve the health care of patients and populations based upon an understanding of the structure and function of the existing health care systems.
Medical Ethics	Philip Crowell	pcrowell@cw.bc.ca	The provision of care that is informed and supported by the application of the principles of law and justice. Includes the principles of proper conduct concerning the rights and duties of the professional, the relations with patients, patient's families, consumers and fellow practitioners.
Nutrition	Linda Casey	Linda.Casey@cw.bc.ca	The interaction between nutritional intake and status and health.



Foundational Systems & Themes Definitions

Theme Name	Theme Lead	Theme Lead Email	Definition
Pathology and Neoplasia	Mike Nimmo Christine Simmons Delilah Topic	michael.nimmo@vch.ca christine.simmons@bccancer.bc.ca Delilah.Topic@bccancer.bc.ca	The study of the nature and cause(s) of diseases as demonstrated by changes in the structure and function in cells, tissues, and organs, including neoplasia.
Patient Safety and Quality Improvement	Malcolm Maclure Arman Abdalkhani	Malcolm.Maclure@ubc.ca dr.a@ubc.ca	The provision of care that is intended to reduce the risk of harm by modification of tasks, tools, teams and systems to improve the 7 dimensions of quality of care: acceptability, appropriateness, accessibility, safety, effectiveness, equity and efficiency.
Pharmacotherapy	Tonia Timperley	tonia.timperley@ubc.ca	The application of the origin, nature, properties, mechanisms of action and effects (positive and deleterious) in the administration of specific drugs, with consideration of the appropriate dosing route, regimen, drug interactions and variability in patient response, as well as evidence for use and the availability of resources in the treatment of disease.
Physiology	Pawel Kindler	pawel.kindler@ubc.ca	The study of the chemical factors, processes and functions of the human body and its parts. <i>Note: For altered states use pathology.</i>
Public Health, Prevention and Control	Jane Buxton	jane.buxton@bccdc.ca	The activities taken to prevent and control disease and disability and to promote the physical and mental health of the population. Includes interventions at the individual and population level based on population based assessments.
Professionalism	Galt Wilson	galtw@mail.ubc.ca	The provision of care based on principles of proper conduct concerning the rights and duties of the professional, relations with patients, patient's families, consumers, and fellow practitioners.

Foundational Systems & Themes Definitions

Theme Name	Theme Lead	Theme Lead Email	Definition
Rehabilitation	Joseph Anthony	joseph.anthony@ubc.ca	The use of a range of means in an interdisciplinary fashion, to restore human function to the maximum degree possible in the treatment of injury or disease.
Resiliency and Well-Being	Brett Schrewe Carol-Ann Courneya	Brett.Schrewe@cw.bc.ca courneya@mail.ubc.ca	This theme aims to establish a foundation of well-being and resiliency in learners that promotes a healthy lifelong practice of medicine. Specifically, it supports practices and role-modeling of self-care, informed and supported by curricular sessions and extracurricular opportunities, which are designed to promote medical student well-being, foster medical student resiliency, and advocate for a culture of health in all aspects of learning and practice.
Sexuality	Shauna Correia	Shauna.Correia@vch.ca	The approach to the evaluation and care of patients who have disrupted sexual functioning from biopsychosocial causes. The development of greater understanding regarding sexual wellbeing, sexual attitudes, sexual behaviors, sexual orientation, and gender identity in order to enhance patient care.
Special Populations – Addictions	Jano Klimas	jklimas@mail.ubc.ca	The approach to patients and populations with habitual psychological or physiologic dependence on a substance or practice that is beyond voluntary control that results in deleterious effects on the individual.
Special Populations – First Peoples	Rebecca Howse	rebecca.howse@ubc.ca	The approach to culturally safe healthcare and wellness and undertaking when working with Indigenous individuals, families and communities, understanding Canada's colonial history and ongoing colonial forces which create significant health disparities for First Nations, Inuit and Metis peoples.



Foundational Systems & Themes Definitions

Theme Name	Theme Lead	Theme Lead Email	Definition
Special Populations - Geriatrics	Naaz Parmar	Naaz.Parmar@vch.ca	The approach to patients and populations who are aged with particular attention to the physiological and pathological aspects of aging and the manifestation of these changes.
Special Populations - Palliative Care	Fify Soeyonggo	Fify.soeyonggo@ubc.ca	The approach to patients and populations who have chronic progressive illnesses with a focus on care and comfort as opposed to curing the underlying disease.
Surgery	Geoffrey Blair	geoffrey.blair@ubc.ca	The use of surgical operative procedures on organs, regions, or tissues in the treatment of deformity, injury and disease.
Visual Science	Nawaaz Nathoo	nawaaz.nathoo@ubc.ca	The study of the eyes and associated visual pathways. This theme is closely integrated with multiple systems, in particular the nervous system.

