REGULATIONS FOR THE DEGREE OF MASTER OF MEDICAL SCIENCES (MMedSc) (Subject to approval)

(*See also General Regulations*)

Any publication based on work approved for a higher degree should contain a reference to the effect that the work was submitted to the University of Hong Kong for the award of the degree.

M.18 Admission requirements

To be eligible for admission to the programme leading to the Master of Medical Sciences, a candidate shall:

(a) comply with the General Regulations;
(b) hold a Bachelor's degree with honours or the degrees of MBBS of this University, or another qualification of equivalent standard from this University or from another University or comparable institution accepted for this purpose; and
(c) satisfy the examiners in a qualifying examination if required.

M.19 Qualifying examination

(a) A qualifying examination may be set to test the candidate's formal academic ability or his /her ability to follow the courses of study prescribed. It shall consist of one or more written papers or their equivalent and may include a project report.
(b) A candidate who is required to satisfy the examiners in a qualifying examination shall not be permitted to register until he/she has satisfied the examiners in the examination.

M.20 Award of degree

To be eligible for the award of the degree of Master of Medical Sciences a candidate shall

(a) comply with the General Regulations; and
(b) complete the curriculum and satisfy the examiners in accordance with the regulations set out below.

M.21 Length of curriculum

The curriculum shall normally extend over one academic year of full-time study, or two academic years of part-time study, with a minimum of 400 hours of prescribed work.

M.22 Completion of curriculum

To complete the curriculum, a candidate shall

(a) follow courses of instruction as prescribed in the syllabuses and complete satisfactorily all required written, practical and/or clinical work;
(b) satisfy the examiners in the modules by continuous assessments and/or by written examinations; and
(c) complete and present a satisfactory dissertation on an approved research project.

The examiners may also prescribe an oral examination.

M.23 Title of dissertation

The title of the dissertation shall be submitted for approval before the end of the second semester of the final academic years, and the dissertation shall be presented not later than the end of the final academic year. The candidate shall submit a statement that the dissertation represents his/her own work (or in the case of conjoint work, a statement countersigned by his/her co-worker, which shows his/her share of the work) undertaken after registration as a candidate for the degree. The examiners may also prescribe an oral or a written examination on the subject of the dissertation.

M.24 Examinations

(a) A candidate who has failed to satisfy the examiners in the written paper but has presented a satisfactory dissertation and has satisfactorily completed the prescribed written and practical work may be permitted to undertake a further period of study in the course of failure and to be re-examined by a specified date not less than one month after the publication of results.

(b) A candidate who has presented an unsatisfactory dissertation but has satisfied the examiners in the written paper and has satisfactorily completed the prescribed written and practical work, may be permitted to revise the dissertation and to re-present it within a specified period of not more than four months after receipt of a notice that it is unsatisfactory.

M.25

A candidate

(a) who has failed to satisfy the examiners in the written paper and has presented an unsatisfactory dissertation; or

(b) who has failed to satisfy the examiners in a second attempt in the written paper or his/her dissertation

shall be recommended for discontinuation of studies under the provisions of General Regulation G12.

M.26 Examination results

At the conclusion of the examinations a pass list shall be published. A candidate who has shown exceptional merit at the whole examination may be awarded a mark of distinction which shall be recorded in the candidate's transcript.

SYLLABUS FOR THE MASTER OF MEDICAL SCIENCES PROGRAMME

A. INDUCTION COURSE

All candidates will be required to attend the induction course (7.5 hours):

MMSC6001 ***Dissertation Writing***

Communicative success in reporting research:
research as communication; features of scientific/research language; signposting to guide the reader

The IMRAD formula:
the structure of dissertations; the Introduction: stating the research gap and the research questions; the Discussion section: making claims about the research findings

Research ethics and citing research:
referring to current knowledge; paraphrasing without plagiarizing; writer's stance and citation

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B. CORE MODULES

Candidates will be required to take **four** modules (20 hours each) from the following 15 core modules. **At least one module** should be selected **from either of the two main sections**, i.e. Research Methods and Biological Systems.

I. RESEARCH METHODS

PATH6100 ***Laboratory Methods and Instrumentation***

Basic concepts in automated DNA sequencing and genotyping;
Basic concepts in conventional and molecular cytogenetics;
Human identity by DNA typing;
Hybridoma technology;
Immunoassays-ELISA and related methods;
In-situ hybridisation techniques (ISH, FISH, CISH);
Principle and applications of flow cytometry;
Principles of gene therapy;
Study of tissue morphology-ultrastructural and confocal microscopy;
Tissue processing and immunohistochemistry.

CMED6100 ***Statistical Methods***

Statistics in clinical practice, measures for location and spread, normal distribution, probability and binomial distribution, logic in statistical inference, significance tests on the means, association, correlation, simple regression analysis, multiple regression, analysis of variance, logistic regression, survival analysis, non-parametric methods, sample size.

CMED6200 ***Epidemiology and Critical Appraisal***

Critical appraisal, meta-analysis and causality;
Descriptive epidemiology: person, place and time;
Epidemiology: definitions, uses, concepts of health, disease and risk factors;
Measurements: rates, proportions, variation, validity and reliability;
Screening, prevention and evaluation;
Sources of information and vital statistics;
Study designs in epidemiology.

PAED6100 ***Clinical Trials Research Methodology***

Clinical trials designs, blinding and placebo effects;
Data analysis;
Data interpretation and extrapolation;
Data processing;
Introduction to clinical trials;
Protocol writing and review;
Reports and publications;
Reviews and meta-analysis;
Roles of the team members conducting clinical trials;
Safety and efficacy parameters.

BIOC6100 ***Practical Bioinformatics***
(Candidates choosing this Core Module should have molecular biology background.)

Gene identification;
Information searching and retrieval: Entrez and SRS;
Internet resources: DNA and protein sequence databases;
Patterns, Motifs, and Profiles analysis;
Phylogenetic analysis;
Sequence alignment: multiple sequence alignment;
Sequence database searching: FASTA, BLAST, Smith-Waterman, algorithm and parameters;
Simple sequence analysis.

CMED6300 ***Research Methods in Health Care***

Principal types of research methods used in evaluation and audit; framing objectives, quantitative and qualitative approaches to evaluation; survey methods; designing questionnaires; sampling, validity, and reliability; measuring outcomes; using examples from health care and health programme evaluation.

CMED6400 ***Evidence Based Practice: An Introduction to Clinical Epidemiology and Decision Analysis***

Clinical practice guidelines and consensus statements;
Critical appraisal of the evidence – diagnosis, therapy and prognosis;
EBP and knowledge management in the local health care environment; Searching the evidence-based literature;
Summary point-of-care tools such as POEMS and CATs;
Systematic reviews and meta-analysis.

SURG6910 ***Laboratory Animal Handling and Surgical Techniques***

Audio-visual instruction on animal handling techniques;
Basic animal surgical techniques;
Common laboratory animal species in the Laboratory Animal Unit;
Immunization and bleeding techniques;
Laboratory animal models for medical research;
Mouse genetics and transgenic technology;
Protocols for raising antibodies using live animals;
Tissues preparation for immunohistochemical examination;
University & Government regulations governing the use of live animals for experimental purposes.

II. BIOLOGICAL SYSTEMS

PHYO6100 ***Cell Biology***

Biology of tumour cells;
Cell cycle and cell death;
Cell differentiation;
Cell surface receptors;
Cellular interaction and immune response;
Intercellular communication;
Intracellular signal transduction;
Neural regeneration;
Neurotrophic factors;
Structure and function of cells.

BIOC6200 ***Genes and Gene Functions***

Physico-chemical properties of genetic material and gene products; the concept of pedigree and gene linkage and their applications; reverse genetics, the human genome; bioinformatics; functional genomics; and transgenics and the molecular basis of some genetic diseases.

PHYO6200 ***Concepts of Human Physiology***

Brain and behaviour;
General principles of endocrine physiology;
Homeostasis and concept of control system;
Motor co-ordination;
Nutrition and energy balance;
Physiological signals;
Respiratory physiology;
Sensation and perception;
The heart and the circulatory system;
The internal environment and regulation of body fluid.

PHAR6100 ***Principles of Drug Action***

Drug interactions;
Immunochemical basis of drug allergy;
Mechanism of drug resistance;
Molecular mechanisms of drug-receptor interaction;
Pharmacogenetic basis of drug idiosyncrasy;
The adverse effects of drugs and the mechanisms responsible;
The development of drug tolerance and physical dependence;
The fate of drugs in the body - their absorption, distribution, excretion and metabolism;
The theoretical basis of dose-response relations.

BIOC6400 ***Working with Genes and Proteins***

Applications of radioisotopes in DNA research: hybridizations;
Applications of radioisotopes in protein research: protein labeling;
DNA sequencing technologies and genome projects;
Gene expression analysis (differential gene expression, cDNA microarray, DNA chips);
Gene function analysis: Transgenic animal technology and animal cloning;
Gene function analysis: Yeast two-hybrid system and phage display system;
Gene mapping, FISH;
Laboratory safety in the use of radioisotopes for biochemical research;
Manipulation of large DNA fragment, large scale manipulation of genomes;
Preparation of nucleic acid samples; labeling nucleic acids: radioactive and non-radioactive approaches;
Protein production in different host systems; Protein purification and separation – the basics and advances;
Understanding radioisotopes commonly used in biochemical research.

CMED6600 ***Biological Basis of Common Health Problems***
(for non-physician only)

Biology and pathophysiology of common diseases including cancer, diseases of the cardiovascular, respiratory, gastrointestinal, neurological, musculoskeletal and reproductive systems, infections and psychiatric diseases; for each selected disease, the following will be included: aetiology and risk factors, pathophysiology and clinical manifestations, pattern and distribution in populations.

PATH6300 ***General Cytopathology***

Ancillary laboratory techniques that can apply in cytopathology;
Application and limitation of clinical cytopathology;
Collection of cell samples;
Interpretation of cytology samples;
Laboratory accreditation;
Laboratory processing of cytology specimens;
Medicolegal aspect of clinical cytopathology;
Organization of a cytopathology laboratory;
Quality assurance program.

C. SPECIALISED MODULES

In addition, each candidate will be required to choose one specialised fields of study.

A total of **six** modules (i.e. total module values = 6) should be selected. At least four must be taken in the chosen specialised field of study; the remaining two can be taken in another related field.

DEPARTMENT OF ANAESTHESIOLOGY

ANAE6200 ***Application of Basic Sciences in Anaesthesiology***

A candidate is required to choose a total of **six** modules (i.e. total module values =6) from the modules listed below.

Module Value	Modules
1	Anaesthetic pharmacology: To learn basic pharmacology of drugs used in the practice of anaesthesiology; To learn the pharmacokinetic principles of drug administration via intravenous, inhalational and other routes commonly used in the practice of anaesthesiology.
2	Applied cardiovascular physiology and monitoring: To learn principles of cardiovascular physiology which are useful to the practice of anaesthesiology and critical care medicine; To learn techniques and applications of common cardiovascular monitoring useful to the practice of anaesthesiology and critical care medicine.

2	Applied respiratory physiology and monitoring: To learn principles of respiratory physiology which are useful to the practice of anaesthesiology and critical care medicine; To learn techniques and applications of common respiratory monitoring useful to the practice of anaesthesiology and critical care medicine.
2	Pain management: To learn the basic principles and techniques required for the safe practice of acute and chronic pain management.
1	Physics in anaesthesiology: To understand principles of physics as applied to the practice of anaesthesiology and critical care medicine.

DEPARTMENT OF ANATOMY

ANAT6100 ***Current Topics in Morphological Sciences, Cell Biology and Neuroscience***

A candidate is required to choose a total of **six** modules (i.e. total module values =6) from the modules listed below.

Module Value	Modules
1	Biotech, proteomics and bio-drug development;
1	Control of cell proliferation and apoptosis;
1	Current techniques for the study of immunocytochemistry, tracers, in-situ hybridisation, histochemistry, enzyme histochemistry, quantitative microscopy;
1	Current topics in neuroimmunology;
1	Epithelial-mesenchymal interactions;
1	Gross anatomy of specialised anatomical regions;
1	Growth factors;
1	Leptin in reproduction;
1	Molecular genetics of cancer;
1	Molecular mechanisms in sexual differentiation;
1	Neurobiology;
1	Neuroprotection in glaucoma;
1	Neurotrophic factors in health and disease;
1	Oxidative stress and inflammation in liver injury;
1	Physiopathology and models of neurodegenerative disorders.

DEPARTMENT OF BIOCHEMISTRY

BIOC6300 ***Biochemistry and Molecular Biology***

A candidate is required to choose a total of **six** modules (i.e. total module values = 6) from the modules listed below.

Module Value	Modules
2	Advanced biochemistry: Signal transduction, biomodulators, enzyme kinetics, catalytic mechanisms, protein chemistry, post-translational modification of proteins.
2	Biochemistry seminar: Present and attend seminars, criticise, think, write and talk about biochemical issues, organise mini-conferences, technical reviews, research proposals, communication skills, personal and career development.
2	Molecular biology of the gene: Eukaryotic gene regulation, control of gene expression, transcription factors, DNA-protein interaction.
2	Practical bioinformatics: (Advice to Applications: candidates choosing this Core Module should have molecular biology background.) Gene indentification; Information searching and retrieval: Entrez and SRS; Internet resources: DNA and protein sequence databases; Patterns, Motifs, and Profiles analysis; Phylogenetic analysis; Sequence alignment: multiple sequence alignment; Sequence database searching: FASTA, BLAST, Smith-Waterman, algorithm and parameters; Simple sequence analysis.

DEPARTMENT OF MEDICINE

MEDI6100 ***Cancer Genetics***

(The following modules are available to medical graduates only)

Module Value	Modules
1	Clinical applications of molecular genetics in cancer medicine;
1	Cytogenetics of human cancers;
1	Gene therapy approaches in cancer medicine;
1	Laboratory practices in cancer genetics;
1	Molecular genetics of human cancers;
1	Stem cell transplantation & kinetics in cancer medicine.

MEDI6300 ***Geriatric Medicine***

Module Value	Modules
2	Common diseases and impairments in the elderly: Appropriate drug prescribing; Chronic medical diseases and management; Impairment, disability, handicap and rehabilitation.

1	General principles in ageing and geriatric medicine: Current concepts in ageing and healthy ageing; Ethical and medico-legal issues; Geriatric assessment.
2	Geriatric syndromes: Evaluation and interventions on syndromes: falls, incontinence, malnutrition and dysphagia, pressure ulcers, dementia.
1	Health and long term care for the elderly: Organisation and service delivery models; Principles and values.

DEPARTMENT OF MICROBIOLOGY

MICR6100 ***Medical Microbiology***

A candidate is required to choose a total of **six** modules (i.e. total module values = 6) from the modules listed below.

Module Value	Modules
1	Antimicrobial susceptibility testing;
1	Biosafety and handling of infectious waste;
1	Cost containment and evidence-based laboratory testing;
1	Infection control and hospital epidemiology;
1	Laboratory and clinical interphase in infectious diseases;
1	Molecular technique in detection and typing of microbial agents;
1	Trends and mechanism of antimicrobial resistance;
1	Virological diagnosis of infectious diseases.

DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY

OBGY6200 ***Assisted Reproduction Technology (Laboratory)***

Module Value	Modules
0.5	Advanced laboratory techniques in assisted reproduction;
1	Embryo culture and cryopreservation in assisted reproduction;
0.5	Reproductive physiology, assessment and principles of management of patients with subfertility;
3	Running of an assisted reproduction laboratory;
1	Semen preparation and assessment of sperm function.

OBGY6400 ***Obstetric and Gynaecological Ultrasonography***

(The following modules are available to medical graduates only)

Module Value	Modules
1.5	Dating and foetal growth;
1	Early pregnancy: diagnosis, foetal viability, ectopic pregnancy;
2	Foetal anomalies: screening;
1	General gynaecology;
0.45	Liquor, placenta and cervix;
0.05	Physics and bioeffects of ultrasound, scanning techniques, choice of equipment.

OBGY6500 ***Introduction to Gynaecological Oncology***

(The following modules are available to medical graduates only)

Module Value	Modules
1	Pathology in gynaecological oncology;
1	Palliative care for patients with gynaecological cancers;
1	Principles of radiotherapy related to gynaecological oncology;
1	Colposcopy;
1	Surgical aspect in gynaecological oncology;
1	The use of chemotherapy in patients with gynaecological cancers.

DEPARTMENT OF ORTHOPAEDICS AND TRAUMATOLOGY

OSUR6100 ***Hand Surgery***

Module Value	Modules
0.5	Applied anatomy and physiology of the hand;
0.5	Functional assessment of hand injuries;
0.5	Gait analysis;
1.5	Laboratory techniques with skin flaps, tendon repairs/transfers, nerve repairs, fracture reconstruction, microvascular surgery;
1	Microsurgery training in orthopaedics;
1.5	Rehabilitation of function after hand injury;
2	Study of clinical problems: traumatic, congenital, or infective problems.

OSUR6200 ***Spine Surgery***

Module Value	Modules
0.5	Biomechanics and assessment of patients with back problems;
0.25	Imaging for spinal problems, applications of computed imaging such as computed tomography and magnetic resonance imaging (This module will be given by the Department of Diagnostic Radiology);
0.5	Intraoperative spinal cord monitoring;

0.5	Laboratory techniques: approaches to the spine, anterior instrumentation, posterior instrumentation;
2	Operative surgery;
0.25	Spinal rehabilitation;
2	Study of clinical problems in 200 patients.

OSUR6300 ***Joint Replacement Surgery***

Module Value	Modules
1	Applied anatomy and biomechanics of the hip and knee;
1	Biomaterials in joint replacement;
1	Operative surgery;
1	Quality of life assessment;
1	Study of clinical problems;
1	Surgical management of chronic arthritis.

DEPARTMENT OF PAEDIATRICS AND ADOLESCENT MEDICINE

PAED6300 ***Child Neurology, Development and NeuroHabilitation***

Module Value	Modules
2	Clinical skills in diagnosis and assessment of neurological and developmental diseases in children;
2	NeuroHabilitation in paediatric practice – concept and outcome measures;
2	Problem solving skills for clinical cases.

PAED6600 ***Paediatric Cardiology***

A candidate is required to choose a total of **six** modules (i.e. total module values = 6) from the modules listed below.

Module Value	Modules
1	Cardiac catheterisation: Indications for cardiac catheterization; Interpretation of cineangiography; Interpretation of haemodynamic results ; Introduction to interventional cardiac catheterization; Principles and techniques of cardiac catheterization.
1	Echocardiography: 2-dimensional, Doppler, colour flow mapping and M-mode echocardiography; Newer modalities: acoustic quantification and Doppler tissue imaging; Prenatal screening: foetal echocardiography; Stress echocardiography; Transoesophageal echocardiography.

1	Investigations in paediatric cardiology: Interpretation of chest roentgenograms; Interpretation of electrocardiograms; Interpretation of results of 24-hour ambulatory electrocardiography; Introduction to electrophysiological study; Exercise testing
1	Long-term outcomes of congenital heart diseases: Approach to management of adolescents and adults with congenital heart disease; Cardiac function after definitive and palliative cardiac surgery; Exercise capacity long after definitive cardiac surgery; Quality of life after surgical repair of congenital heart disease.
3	Principles and practice of paediatric cardiology: Approach to diagnosis of congenital heart disease; Clinical presentation; Intensive care after open and closed heart surgery; Interpretation of clinical signs; Medical and surgical management of congenital heart disease; Pathology, haemodynamics and natural course of acyanotic and cyanotic congenital heart diseases.

PAED6700 ***Paediatric Endocrinology***

Module Value	Modules
1	Basic concepts in paediatric endocrinology: Anatomy, physiology, embryology and development of endocrine glands; Inborn error of metabolism; Mechanisms and actions of hormones and growth factors; Molecular genetics of endocrine disorders; Principles and practice of radioimmunoassays, radioreceptor assays, radioligand blotting, western blotting and tissue culture.
1	Dynamic tests of endocrine functions in children: Interpretation; Practical conduct of various tests; Theoretical basis of endocrine testing.
0.5	Growth: Abberant growth patterns; Factors affecting growth; Growth standards - use and abuse; Methods of auxological anthropometry; Normal foetal and postnatal growth.

0.5	Laboratory research techniques and molecular studies of hereditary diseases: General and special laboratory techniques in paediatric research; Molecular basis of some common hereditary diseases; Molecular biology tools for studying hereditary diseases.
3	Study of clinical endocrine problems: Clinical manifestations; Diagnosis and management; Pathogenesis.

DEPARTMENT OF PATHOLOGY

PATH6200 ***Clinical and Molecular Pathology, Haematopathology, and Immunology***

A candidate is required to choose a total of **six** modules (i.e. total module values = 6) from the modules listed below. When there are insufficient students enrolling in any one module, it may not be offered and our coordinator will advise the candidate to choose a related one.

Module Value	Modules
1	Blood cell and bone marrow pathology: Biology of normal haemopoietic cells; Bone marrow failure and transplantation; Common haematological malignancies.
2	Molecular genetics and cytogenetics of cancer: Genetic basis of cancer and implications for clinical diagnosis, Prognostication and disease monitoring e.g. liver cancer, Nasopharyngeal carcinoma, lung cancer; Principles and analysis of cytogenetics and molecular cytogenetics of malignancy.
1	Essence and advances in contemporary immunobiology: Dendritic cells (DC) in immune responses; Laboratory analysis of lymphocyte development and activation; Role of immunity in clinical diseaes; T and B lymphocyte development and biology.
1	Immunological techniques for clinical diagnosis and research: Analysis of lymphocytic phenotype; Cell cycle and apoptosis; Clinical laboratory immunology; Principles and techniques in flow cytometry; Techniques and applications of immunohistochemistry and immunofluorescence microscopy.

2	Techniques and applications of molecular pathology: Basic concepts and research methodology in the molecular pathology of human diseases; Molecular basis of the pathogenesis of various human cancers – e.g. malignant lymphoma, colonic cancer, breast and ovarian cancer.

PATH6400 ***Clinical Cytology***

Module Value	Modules
1	Fine needle aspiration cytology;
1	Gynaecological cytology I;
1	Gynaecological cytology II;
1	Hematological cytology and ancillary techniques in cytopathology;
1	Non-gynaecological cytology: Cytology of respiratory tract, effusion fluid, urinary tract, cerebrospinal fluid and joint fluid..

DEPARTMENT OF PHARMACOLOGY

PHAR6200 ***Current Topics in Pharmacology***

Module Value	Modules
2	Basic and applied toxicology: The nature and mechanism of the toxicity of natural and synthetic substances, current methods for determining and evaluating potential health hazards and risks.
2	Drugs for gastrointestinal diseases: Current understanding of the pathogenesis of gastroduodenal ulcers and inflammatory bowel diseases, the rationale and the strategy of drug treatment and the future directions of drug development for ulcer disease.
2	Drugs for the treatment of cardiovascular diseases: Antihypertensive drug therapy, vasodilators and diuretics, new developments in vasoactive compounds, lipid-lowering agents and choice of therapy, antiarrhythmic agents, therapy for heart failure.

DEPARTMENT OF PHYSIOLOGY

PHYO6300 ***Current Topics in Physiology***

A candidate is required to choose a total of **six** modules (i.e. total module values = 6) from the modules listed below.

Module Value	Modules
6	Cardiopulmonary sciences;
6	Cell physiology;
6	Endocrinology;
6	Neurophysiology and brain function.

DEPARTMENT OF PSYCHIATRY

PSYS6100 ***Medical Psychology***

Module Value	Modules
3	Counselling of a patient with chronic illness;
3	Psychological assessment and interventions in health care settings.

PSYS6200 ***Sleep Disorder***

A candidate is required to choose a total of **six** modules (i.e. total module values = 6) from the modules listed below.

Module Value	Modules
2	Clinical assessment of sleep disorder;
2	Physiological assessment of sleep disorder;
2	Physiology of sleep;
2	Sleep pathology;
2	Treatment of sleep disorder.

DEPARTMENT OF SURGERY

SURG6100 ***Breast Surgery***

Module Value	Modules
1	Breast clinic;
1	Psychological morbidity of breast disease (in conjunction with the Department of Psychiatry);
1	Radiological investigations in breast disease and screening for breast cancer (in conjunction with the Department of Diagnostic Radiology);
1	Reconstruction and cosmetic surgery of the breast;
1	Surgical anatomy and physiology of the breast;
1	Surgical pathology of breast disease.

SURG6200 ***Colorectal Surgery***

Module Value	Modules
1	Benign conditions affecting the colon, rectum and anus;
1	Investigation for large bowel diseases;
1	Malignant conditions affecting the colon, rectum and anus;
1	Research project;
1	Surgical anatomy and physiology of the colon, rectum and pelvic floor;
1	Surgical pathology of the large bowel.

SURG6300 ***Ear, Nose and Throat Surgery***

Module Value	Modules
1	Balance test;
1	Brainstem-evoked response audiometry;
1	Investigatory procedure: Acoustic rhinomanometry;
1	Investigatory procedure: Otoacoustic emission;
2	Use of the laser in ENT.

SURG6400 ***Gastroduodenal Surgery***

Module Value	Modules
1	Anatomy and physiology of the stomach and duodenum;
1	Diagnostic and therapeutic endoscopy;
1	Gastric tumours;
1	Laparoscopic surgery;
1	Surgical treatment of benign and malignant conditions;
1	Ulcer diseases and their complications.

SURG6500 ***Head and Neck Surgery***

Module Value	Modules
1	Assessment of the extent of head and neck cancer: a) endoscopy, b) other investigations;
2	Laboratory practice of microsurgery;
2	Microvascular free flap reconstruction;
1	Regional flap reconstruction.

SURG6600 ***Hepatobiliary and Pancreatic Surgery***

Module Value	Modules
1	Hepatectomy and other major surgical procedures;
1	Laparoscopic surgery;
1	Percutaneous, laparoscopic and intraoperative ultrasonography;
2	Study of specific clinical problems, e.g. hepatocellular carcinoma, recurrent pyogenic cholangitis, acute pancreatitis (250 patients);
1	Surgical anatomy of the liver, biliary tract and pancreas.

SURG6700 ***Neurosurgery***

Module Value	Modules
1	Microsurgical vascular anastomosis;
5	Neuroanatomy of operative approaches.

SURG6800 ***Oesophageal Surgery***

Module Value	Modules
1	Benign diseases of the oesophagus;
1	Diagnostic and therapeutic endoscopy;
1	Epidemiology;
1	Minimal access surgery of the oesophagus (benign and malignant diseases);
1	Surgery for oesophageal cancer;
1	Treatment options for oesophageal carcinoma.

SURG6900 ***Paediatric Surgery***

A candidate is required to choose a total of **six** modules (i.e. total module values = 6) from the modules listed below.

Module Value	Modules
1	Developmental biology and molecular genetics for congenital anomalies and paediatric surgical conditions;
1	General paediatric surgery;
1	Neonatal surgery;
1	Paediatric endosurgery: endoscopy, laparoscopy and minimally invasive surgery;
1	Paediatric hepatobiliary surgery, including transplantation;
1	Paediatric surgical oncology;
1	Paediatric urology.

SURG6010 ***Plastic and Reconstructive Surgery***

Module Value	Modules
2	Care of acute and chronic wounds;
1	Congenital deformities and management;
1	Microsurgery for reconstruction;
1	Principles of flap surgery;
1	Traumatic injuries and management.

SURG6920 ***Principles and Practice of Endoscopy***

Module Value	Modules
1	Basic principles;
1	Diagnostic endoscopy;
1	Preparation and patient care;
2	Research in endoscopy;
1	Therapeutic endoscopy.

SURG6030 ***Surgical Endocrinology***

Module Value	Modules
1	Endocrine surgical pathology;
1	Laparoscopic adrenal surgery;
1	Localisation of endocrine tumours;
1	Management of common surgical endocrine problems including thyroid nodule, thyroid cancer and primary hyperparathyroidism;
1	Surgical anatomy of the thyroid, parathyroid and adrenal glands;
1	Thyroid and parathyroid surgery.

SURG6090 ***Surgery in General***

Module Value	Modules
3	Principles and practice of general surgery;
2	Surgical education and training;
1	Surgical research.

SURG6930 ***Surgical Oncology: From Laboratory to Clinical Applications***

Module Value	Modules
1	Cancer biomarkers – identification and diagnostic application;
1	Current topics in surgical malignancies;
2	Molecular mechanisms of cancer development and progression: Genomics and proteomics approaches;
1	New therapeutic interventions for cancer treatment;
2	Surgical anatomy, pathology and etiology of local prevalent cancers.

SURG6050 ***Urology***

Module Value	Modules
1	Benign prostatic hyperplasia;
1	Endourology;
1	Extracorporeal Shock Wave Lithotripsy (ESWL);
2	Urodynamics: principles & practice;
1	Urolithiasis.

SURG6070 ***Vascular Surgery/Non-Invasive Vascular Laboratory Imaging Techniques***

Module Value	Modules
1	Anatomy, physiology, haemodynamics and ultrasound physics;
1	Basic principles of Doppler assessment of blood flow in normal and pathological conditions;
1	Colour Doppler assessment of venous obstruction and incompetence;
1	Detection, quantitation, and prediction of cerebrovascular insufficiency;
2	Real-time colour Doppler imaging of cerebral and peripheral arteries.

D. DISSERTATION

The dissertation shall comprise a record of substantial experimental or clinically-based work on the project, or a review of the existing literature on the subject of the project, presented in a form suitable for publication. A minimum of 200 hours is required for the project.