Module Synopsis (2019)

4FHH1238 Diagnostic Imaging 1
The module incorporates the theory and practice which students will develop clinical competency in skeletal system radiographic imaging technique, including appraising image information for both clinical manifestations and technical accuracy. Therefore, students will develop knowledge and understanding of the anatomy, physiology and pathology of the skeletal system and associated soft tissues (including dental radiography). Clinical placement attendance is integral to this module and students are expected to attend clinical placement.

4FHH1239 Diagnostic Imaging 2
Digital imaging 2 enables students to demonstrate a broad understanding of the structure, function and disease processes of the human body together with knowledge of appropriate radiographic and medical terminology. Developing knowledge and clinical competency in chest and abdomen X-ray imaging techniques, students will also develop an understanding of anatomy, physiology and pathology of the respiratory system and the gross anatomy of the heart and great vessels to develop an appreciation of the resultant chest radiograph appearances. For abdomen X-rays, the focus will be on understanding the position and gross appearances of relevant anatomy and commonly seen pathologies. Students will have an introduction to the principles of homeostasis, and how this is affected within disease processes. Clinical placement attendance is integral to this module and students are expected to attend clinical placement.

4FHH1240 Imaging Science Foundations
This module aims to develop a knowledge base in the fundamental concepts of the science of ionising radiation imaging and its induced effects on humans, components and functions of equipment for conventional and dental X-ray imaging, radiation protection principles and regulations governing the use of ionising radiation. Hence, students will be able to produce high quality diagnostic X-ray images whilst following safe working practices within the healthcare environment.

4FHH1241 Preparation for Professional Practice
The module provides a foundation for academic study in Higher Education, including an introduction to the skills for research. The importance of personal and professional development, life-long learning and the need to maintain a record of learning will be a core component of the module, whilst ensuring that students are aware of the relevant legislation and expected standards of the professional and regulatory bodies required for clinical practice. The concepts of client/customer care in relation to patient/service user interactions will be explored, as will the concepts of preconception, prejudice and unconscious bias.

Mandatory and statutory training will also be delivered. This will include health & safety, infection control, information governance, Basic Cardiac Life Support and manual handling.
4FHH1242 An Introduction to Inter-Professional Education
This module is designed to gain an appreciation of the concepts and principles of inter-professional education and explore how inter-professional education may enhance professional practices and patient/user experiences in health and social care provision. Students will be given the opportunity to explore multi-professional working in order to improve understanding of a range of professional roles, and encourage co-operative learning and working. Students will be expected to review core factual and conceptual information and then demonstrate their knowledge and understanding of it through contribution to group activities.

5FHH1274 Radiographic Research Methods
This module covers the methods used for the analysis of health research and audit data, enabling students to demonstrate awareness of the application of reviews of research and audit to the critical evaluation of medical diagnostic imaging practice. Using practical medical imaging research examples, students will be able to learn about the various stages of the research process. These steps will include developing a suitable research question, choosing a methodology and methods, ethical issues, recruitment approaches, data collection, data analysis and results presentation. The module will also cover approaches for evaluating and critiquing published research evidence, together with means of synthesizing this within a methodical (systematic) review of literature. Indicative topics include: research and evidence based practice, asking a good research question, developing aims and objectives, literature critique and evaluation using frameworks, determining research quality, interpreting reviews, medical imaging research, writing a proposal, research and audit, research philosophies, quantitative methods, hypotheses, statistics including an introduction to SPSS, presenting graphs and tables, qualitative methods, thematic and content analysis, questionnaires, interviews, focus groups, research ethics.

5FHH1275 Developing Professional Practice
In this module, students will be introduced to a wide range of skills that will underpin their clinical practice and professional development. Students will obtain knowledge of the psychosocial aspects of patient care as applied to radiographic practice in line with professional standards and values of care. This will include the psychology and sociology of patient illness and pain, including its impact on specific patient groups. The module will further develop skills of reflection, communication, assertiveness, motivation and team work which will be discussed in conjunction with methods of clinical decision-making. Students will be able to experience strategies for dealing with stress and anxiety, both of self and patients, anger management and conflict resolution in order to develop professional resilience and social awareness. Dementia training, mandatory training updates will also be delivered.
5FHH1276 Imaging Science Principles
The module discusses the principles, components and operation of computed tomography, magnetic resonance imaging, ultrasound, radionuclide imaging, positron emission tomography and single-photon emission computed tomography. The same will also be explored for fluoroscopic, mobile, mammography, dental imaging equipment, and dual-energy X-ray absorptiometry. Digital imaging, picture archiving and communication systems, quality assurance and maintenance of diagnostic imaging equipment will be covered with a range of teaching and learning methods, including laboratory experiments. Students will be able to apply their knowledge of specialised diagnostic imaging equipment and modalities to produce high quality diagnostic images whilst minimising potential detriment to patients from the use of ionising and non-ionising radiations. The module content will also cover radiation protection and risks associated with the related imaging modalities.

5FHH1277 Diagnostic Imaging 3
This module focuses on enabling students to develop knowledge and understanding of complex imaging of the gastrointestinal, genitourinary (including reproductive) and respiratory systems. Emphasis will be made on patient-centred care, theoretical knowledge relating to safe performance and professional working practices within a diagnostic imaging environment. In addition, they will improve their knowledge and understanding of detailed anatomy, physiology, and pathology of the gastrointestinal and genitourinary (including reproductive) systems. Students will appreciate the identification of the radiographic appearances of anatomy and common pathologies of the gastrointestinal, genitourinary (including reproductive) and respiratory systems on complex radiographic imaging.

Relevant techniques used in fluoroscopic procedures (both diagnostic and interventional) and CT, will be the focus of this module. MRI, RNI and Ultrasound will be explored as relevant. Breast and obstetric imaging will also be considered, as part of the reproductive system.

Students will evaluate referral forms to ensure that they are justified under radiation regulations. They will develop an appreciation of the different patient pathways including medical and surgical emergencies of the systems specified, consider ways to optimise patient care, and to adapt practice to meet the needs of different groups and individuals. Clinical placement attendance is integral to this module and students are expected to attend clinical placement.

5FHH1278 Diagnostic Imaging 4
This module will enable students to develop detailed knowledge and understanding of complex imaging of the cardiovascular, nervous and endocrine systems. Students will work to further develop their clinical skills in these areas, and clinical competency in safely performing head CT examination. Additionally, they will develop detailed knowledge and understanding of anatomy, physiology and pathology of the cardiovascular, nervous, and endocrine systems and accurately identify the radiographic image appearances of anatomy and common pathologies.
Students will explore CT procedures involving the systems specified, with emphasis on patient-centred care, safety considerations and protocols. Students will also develop knowledge and understanding of a range of more complex imaging techniques, including related interventional studies, angiography, CT, MRI, US and radionuclide imaging to be able to assist in these procedures.

Students will evaluate referral forms to ensure that they are justified under radiation regulations. They will develop an appreciation of the different patient pathways, including medical and surgical emergencies of the systems specified, consider ways to optimise patient care, and to adapt practice to meet the needs of different groups and individuals. Clinical placement attendance is integral to this module and students are expected to attend clinical placement.

**6FHH1198 Research in Radiography**
This module requires students to undertake an audit or research project, including a literature review and an analysis of findings. Students will be able to use physical, graphical, verbal and electronic methods to collect, process and interrogate data accurately. This is an independent study module and each student is allocated an individual research supervisor for the duration of their study. In undertaking this module, it is expected that students will evaluate published radiographic research, research quality criteria, approaches to be used when undertaking a methodical literature review, and research ethics considerations.

**6FHH1199 Enhancing Health and Social Care through Inter-Professional Education**
The module is designed to give students further opportunities of exploring the importance of multi-professional groups in order to improve understanding across professional boundaries and encourage collaborative learning and working that will bring benefit to patient/service-users. Students are required to bring specialist in-depth knowledge of their profession and professional codes of conduct to a group setting so that health and social care pathways are critically reviewed in the context of professional practice. The module will cover inter-professional and collaborative working strategies, current government policies impacting on health and social care provision, health and social care initiatives, strategies and developments related to service delivery and service improvement. The group activities will require participants to be confident and flexible in identifying complex issues and will require them to challenge opinion and reflect on actions.

**6FHH1200 Advancing Professional Practice**
The focus of the module is to develop employability skills in the job application and selection process with regard to their professional roles and responsibilities to others, as well as to the Allied Health Professions Council, the Singapore Society of Radiographers and other regulatory bodies in professional radiographic practice.

The roles of health education, health promotion and their impact on partnership models of care, skills necessary for future mentorship and leadership will be critically evaluated. Theories of clinical governance and service improvement and their roles within radiology will also be covered. Mandatory and statutory training updates are also included within the module content.
**6FHH1201 Preliminary Clinical Evaluation 1**
This module builds upon the student’s previous knowledge and capability in image appreciation, critique and evaluation of radiographic anatomy and pathology relating to the appendicular skeleton. Skills relating to clinical evaluation and descriptive report writing will be introduced. Pattern recognition and mechanisms of injury will be explored as well as an understanding of the scope of practice relating to preliminary clinical evaluation, preparing students for image interpretation as autonomous practitioners. This module will provide the students with a foundation of knowledge relating to image interpretation, allowing them to provide a coherent and technical evaluation that can be interpreted by any clinical referrer, thus meeting the needs of the service user.

**6FHH1202 Preliminary Clinical Evaluation 2**
This module builds upon the student’s previous knowledge and capability in image appreciation, critique and evaluation of radiographic anatomy and pathology of the axial skeleton, together with an appreciation of image appearances in the chest, abdomen and CT head scans. Skills relating to clinical evaluation and descriptive report writing will be introduced. Pattern recognition and mechanisms of injury will be explored as well as an understanding of the scope of practice relating to preliminary clinical evaluation, preparing students for image interpretation as autonomous practitioners. This module will provide the students with a foundation of knowledge relating to image interpretation, allowing them to provide a coherent and technical evaluation that can be interpreted by any clinical referrer, thus meeting the needs of the service user.

**6FHH1203 Clinical Decision-Making and Diagnostic Practice**
This module aims to develop detailed knowledge and understanding of the applications of diagnostic imaging and non-imaging tests leading to critical discussion of the rationale as applicable to patient pathways, in addition to critically assessing and applying guidelines that impact on diagnostic imaging. Students will be re-introduced to the concepts of prioritisation and justification required for clinical decision-making. Patient pathways will include the ageing population, paediatric patients, and forensic examinations including NAI, neurology, medical/surgical conditions, oncology and trauma. Clinical placement attendance is integral to this module and students are expected to attend clinical placement.