Subject Code	Subject Title
RS5301	Orthopaedics and Traumatology
RS5302	Clinical Neuroscience and Neurology
RS5303	Research Methods and Statistics
RS5304	Human Development across Lifespan
RS5305	Rehabilitation Psychology
RS5306	Movement Science
RS5307	Exercise Science
RS5308	Functional Anatomy
RS5310	Principles of Physiotherapy Practice
RS5311	Musculoskeletal Physiotherapy I
RS5312	Musculoskeletal Physiotherapy II
RS5313	Manipulative Physiotherapy
RS5314	Electrophysical Therapy I
RS5315	Electrophysical Therapy II
RS5316	Cardiorespiratory Physiotherapy
RS5317	Pediatric Neurology and Developmental Disabilities
RS5318	Neurological Physiotherapy I
RS5319	Neurological Physiotherapy II
RS5320	Primary Health and Community Care
RS5322	Professional Ethics and Legal Issues
RS5323	Administration and Management
RS5324	Research Project
RS5331	Clinical Education I
RS5332	Clinical Education II
RS5333	Clinical Education III
RS5334	Clinical Education IV
RS5335	Clinical Education V
RS5336	Clinical Education VI

Subject Code	**RS5301**
Subject Title	**ORTHOPAEDICS AND TRAUMATOLOGY**
Credit Value	3
Level	5
Pre-requisite / **Co-requisite/ Exclusion**	Nil
Objectives	To introduce basic concepts and advanced knowledge of trauma and diseases of the musculoskeletal system, including knowledge of the epidemiology, etiology, pathology and pathophysiology, and principles of diagnosis and orthopaedic management.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** Professional/academic knowledge and skills a. apply the knowledge of anatomy, physiology and biomechanics to analysis of the clinical presentation (signs & symptoms) and diagnosis of disorders of musculoskeletal system; b. understand the pathophysiology of common injuries and disorders of the musculoskeletal system at cellular, tissue and organ level; c. understand the clinical use of diagnostic imaging and modern technology for the diagnosis of musculoskeletal disorders; d. discuss the concepts and principles underlying the general management of fractures, joint and soft tissue problems; e. identify differences in pathologies and principles of management of musculoskeletal dysfunctions at different life stages (e.g., children, adult, elderly); f. introduce the common medications used in the treatment of orthopedic conditions, including mechanism of action and possible side effects to an individual's functional activities. g. compare the prevalence/incidence of musculoskeletal conditions in Hong Kong, as available, to that observed elsewhere. h. acquire adequate foundation knowledge to prepare himself/herself to be a proactive member of the team which includes other medical and health related professionals.
Subject Synopsis/ Indicative Syllabus	Introduction & Common Diagnostic Tests for the Musculoskeletal System General management principles following damage to bone, joints, muscle and other soft tissue. Common tests for differential diagnosis of musculoskeletal disorders, e.g., X-ray, MRI, Ultrasound, CT scan and special manoeuvres. Lower Limb / Upper Limb / Trunk Etiology, pathology, signs & symptoms, diagnostic tests, general management, prognosis, common complications and prevention. Topics include: Fractures, articular and soft tissue problems, dislocation, deformities, degenerative changes and amputation.

Rheumatic Diseases

Common rheumatic disease groups; pattern of development, pathological processes, related signs and symptoms, potential for functional limitations and general management.

Recognition of Musculoskeletal Disorders/Conditions with respect to —

-definition

-prevalence/incidence in Hong Kong / elsewhere

-progress towards prevention

-cause/etiology

-clinical features (signs & symptoms)

-general management of a specific condition

- *relevant health care professionals and roles*
- *diagnosis/usual tests*
- *operative/non-operative procedures*
- *common medications*
- *complications/limitations*

-classification of World Health Organization (WHO). impairment, disability, handicap

-prognosis; time course

Teaching/Learning Methodology

Through a series of interactive lectures, foundation knowledge of musculoskeletal trauma and diseases is introduced. Multimedia technology is incorporated in the interactive lectures to improve the efficiency of student learning. The aim of seminars is to encourage students' active learning. Students are required to analyze and discuss the pathology and pathophysiology of musculoskeletal disorders.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed							
		a	b	c	d	e	f	g	h
Coursework	60	√	√	√	√	√	√	√	√
Examination	40	√	√	√	√	√	√	√	√
Total	**100**								

Knowledge of the epidemiology, etiology and pathology, and principles of diagnosis and orthopaedic management will be covered by **written examination and quiz** (2/3 coursework).

Ability to apply the knowledge of anatomy, physiology and biomechanics to analysis of the clinical presentation (signs & symptoms) and diagnosis of the disorders of musculoskeletal system will be assessed by **seminar presentation** (1/3 coursework).

Student Study Effort Expected	***Class contact:***	***(39 Hrs.)***
	▪ Lecture	36 Hrs.
	▪ Seminar	3 Hrs.
	Other student study effort:	***(96 Hrs.)***
	▪ Self-learning	66 Hrs.
	▪ Project	30 Hrs.
	Total student study effort	**135 Hrs.**
Reading List and References	**Required Text:** Solomon L., Warwick D.J., Nayagam S. (2005). Apley's Concise System of Orthopaedics and Fractures. 3rd Edition. London: Hodder Arnold. **Recommended Reading:** Hoppendfeld S and Murthy V.L.(2000). *Treatment & Rehabilitation of Fractures.* Philadelphia: Lippincott Williams & Wilkins. David L. Hamblen and Hamish Simpson (2007). *Outline of fractures, including joint injuries.* 12th ed. Edinburgh: Churchill Livingstone. John H. Klippel etc (eds) (2007). *Primer on the rheumatic diseases*. Springer. Catherine C. etc (eds) (2008*). Pathology : implications for the physical therapist 3rd ed* . Philadelphia : Saunders. Lee SW (1999). *Cervical spinal disorders. A textbook for rehabilitation sciences students.* Singapore: Springer-Verlag. McRae R, Kinninmonth AWG. (1997). *An illustrated colour txt. Orthopaedics and Trauma.* London: Churchill Livingstone. Shepherd, R. (1995). *Physiotherapy in paediatrics* (3rd ed) London: Butterworth-Heinmann.	

Subject Code	**RS5302**
Subject Title	**CLINICAL NEUROSCIENCE AND NEUROLOGY**
Credit Value	3
Level	5
Pre-requisite / **Co-requisite/ Exclusion**	Nil
Objectives	1. Students will gain knowledge in the functions of various parts of the nervous system, and understand how structural and functional changes in certain parts of the nervous system may lead to neurological deficits for patients. 2. Students will understand recent development in clinical neuroscience, and how these concepts can be integrated in clinical applications.
Intended Learning Outcomes	***On successful completion of the subject, a student will be able to:*** <u>Professional/academic knowledge and skills</u> a. analyze mechanisms of information processing which occur at different levels of the nervous system. b. analyze functions of the nervous system, e.g., sensorimotor: sensation; control of posture, locomotion, reaching; higher cortical functions: attention, memory, perception, language. c. integrate knowledge of the structure and function of the nervous system to explain selected 'altered' states, i.e., due to development, injury or disease. d. synthesize information on the adaptive range of the nervous system in order to explain: • the recovery of function following an injury • the subsequent functioning of the system, post-injury • the continued development of an altered system <u>Attributes for all-roundedness</u> a. read and summarize information from the scientific and professional literature related to clinical neuroscience.
Subject Synopsis/ Indicative Syllabus	1. Review: the neuron and synaptic transmission 2. Development of the nervous system 3. Anatomy and physiology of the nervous system – system and region approaches ▪ Somatosensory System - Pain - Sensations ▪ Autonomic Nervous System

- Motor System
  - Perception and movement
  - Motor control
  - Muscle tone
  - Movement disorders
- Auditory, Vestibular, and Visual System
- Blood supply and cerebrospinal fluid system
- Peripheral Nervous System
- Spinal Region
- Brain Stem
- Cerebrum
  - -Attention
  - - Memory
  - - Language, communication
  - - Perception

4. Clinical correlates: Explain how an altered state of the nervous system would lead to common neurological conditions
5. Introduce the concept of neuroplasticity as the foundation of rehabilitation
6. Introduce the advances in clinical neuroscience

Teaching/Learning Methodology

A blended teaching mode will be adopted. Lectures will be delivered. Based on assigned readings and/or video presentations, students will be able to understand the mechanisms underlying specific function(s) of the nervous system. Clinical correlates will be included to explain the pathophysiology of common neurological conditions.

Laboratory sessions allow students to observe brain specimens or models of different neural structures and to observe methods to study brain functions. By deepening their understanding of neuroanatomy, students can appreciate the contributions of each specific neural structure for maintaining normal neurological function in human being. Students can also appreciate approaches to examine these neural structure and functions.

Self-directed learning encourages students to review the subject content and to continue to seek current knowledge by referring to reference materials.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed				
		a	b	c	d	e
2 MCQ tests	90	√	√	√	√	√
Laboratory work	10		√	√		
Self-directed learning	-	√	√	√	√	√
Total	**100**					

MCQ test: Students will be tested on the theoretical knowledge of clinical neurology and neuroscience delivered in the lectures and laboratories background

	Laboratory work: In-class laboratory work assignment will be conducted to ensure that students have active learning on the materials delivered during the laboratory sessions. **Self-directed learning** encourages students to review the subject content and continue to seek current knowledge by referring to reference materials.	
Student Study Effort Expected	***Class contact:***	***(41 Hrs.)***
	▪ Lecture	36 Hrs.
	▪ Laboratory session	5 Hrs.
	Other student study effort:	***(65 Hrs.)***
	▪ Self –directed learning	65 Hrs.
	Total student study effort	**106 Hrs.**
Reading List and References	**Required Text:** Lundy-Ekman L. (2018). *Neuroscience – Fundamentals for Rehabilitation.* 5th ed. Philadelphia: W.B. Saunders. USA. **Recommended Text / Reading:** Bear M F. (2013) Neuroscience : *exploring the brain*. 4th ed. Baltimore: Lippincott. Gazzaniga M, Ivry R B, Mangun G R. (2018). *Cognitive Neuroscience: The Biology of the Mind*. 5h ed. W. W. Norton & Company	

Subject Code	**RS5303**
Subject Title	**RESEARCH METHODS AND STATISTICS**
Credit Value	3
Level	5
Pre-requisite / **Co-requisite/ Exclusion**	Nil
Objectives	The subject is designed to provide the students with a basic level of understanding of the process of critical inquiry, research methodology, statistical concepts and data analysis.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** <u>Professional/academic knowledge and skills</u> a. Explain the concept of systematic inquiry and its application to the health care field with specific reference to rehabilitation services. b. Explain the fundamental concepts related to different aspects of research methodology (study designs, sampling, measurement issues). c. Select proper methods of data coding, recording, and analysis for a given investigative design. d. Use the statistical package for social science (SPSS) to conduct data analysis properly. e. Correctly present and interpret the results of the statistical analysis of a given set of data. f. Perform critical appraisal of scientific literature in the field of rehabilitation.
Subject Synopsis/ Indicative Syllabus	• Process of critical inquiry (formulation of research question, literature research, critical appraisal of literature, designing a research project) • Sampling techniques • Concepts of measurement (Reliability, validity, variables, bias) • Basic statistical concepts • Quantitative research methods • Qualitative research methods • Evidence-based practice • Research ethics • Central Limit Theorem • Probability • Descriptive and inferential statistics • Parametric and non-parametric statistics • Hypothesis testing • t-test • Analysis of variance

- Correlation and regression analysis
- Analysis of reliability and validity of measurement tools
- Epidemiology
- Analysis of qualitative data

Teaching/Learning Methodology

A blended learning approach will be used. Online lectures are used to highlight the principles of critical inquiry, theory building, design of investigative studies, data analysis and statistical methods. Activity-based laboratory sessions provide experiential learning. Review seminars are used to reinforce the key concepts delivered in online lectures.

Students are also given opportunities to use computer-based search strategies for the professional and scientific literature (e.g., Internet, library resources, CD-ROM, etc.) in the tutorials. A practical component will be used for the application and discussion of these principles. A laboratory handbook with step-by-step instructions will be provided to guide the students in the use of computer software (SPSS) for data analysis, and will allow the students to acquire the necessary skills in statistical analysis independently. Seminar presentations are conducted to enhance the students' abilities to critically appraise journals and articles through discussion and presentation.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed					
		a	b	c	d	e	f
Written test	50	√	√	√		√	√
Written assignment	20			√	√	√	√
Group seminar presentation	30		√	√		√	√
Total	**100**						

Written test: This aim of this assessment is to evaluate the students' understanding of all the major concepts learned in the semester.

Written assignment: The students are required to integrate what is learned throughout the semester and perform a statistical analysis of a given set of data and write up a report.

Group seminar presentation: The students are required to integrate what is learned throughout the semester and perform a critical appraisal of a scientific journal paper.

Student Study Effort Expected	***Class contact:***	***(31 Hrs.)***
	▪ Seminar	9 Hrs.
	▪ Laboratory	22 Hrs.
	Other student study effort:	***(78 Hrs.)***
	▪ Online lectures	22 Hrs.
	▪ Self-guided tutorials	10 Hrs.
	▪ Written assignment	6 Hrs.
	▪ Group seminar presentation	20 Hrs.
	▪ Self-study for written test	20 Hrs.
	Total student study effort	**109 Hrs.**

Reading List and References

Required textbook:

Berg KE, Latin RW. Essentials of research methods in health, physical education, exercise science, and recreation. 3rd ed. Philadelphia: Wolters Kluwer/ Lippincott Williams & Wilkins; 2008.

Reference texts:

Barbour RS. Introducing Qualitative Research: a Student's Guide to the Craft of Doing Qualitative Research. London: Sage Publications; 2008.

Berg BL. Qualitative Research Methods for the Social Sciences. Boston, MA: Pearson/Allyn & Bacon; 2007.

Huizingh E. Applied Statistics with SPSS. London: Sage Publications; 2007.

Knowles JG, Cole AL. Handbook of the Arts in Qualitative Research: Perspectives, Methodologies, Examples, and Issues. Los Angeles: Sage Publications; 2008.

Leary MR. Introduction to Behavioral Research Methods. Boston, MA: Allyn and Bacon; 2008.

Levin J. Elementary Statistics in Social Research: the Essentials. Boston: Pearson Allyn & Bacon; 2007.

Peacock JL. Presenting Medical Statistics from Proposal to Publication: a Step-by-Step Guide. Oxford, New York: Oxford University Press; 2007.

Portney LG, Watkins MP. Foundations of clinical research: applications to practice. 3rd ed. Upper Saddle River, NJ: Pearson/ Prentice-Hall Inc; 2009.

Rubin A. Statistics for Evidence-based Practice and Evaluation. Belmont, CA: Thomson Higher Education; 2007.

Willis J. Foundations of Qualitative Research: Interpretive and Critical Approaches. Thousand Oaks: Sage Publications; 2007.

Subject Code	**RS5304**
Subject Title	**HUMAN DEVELOPMENT ACROSS LIFESPAN**
Credit Value	3
Level	5
Pre-requisite / **Co-requisite/ Exclusion**	Nil
Objectives	The subject is designed to provide the students with an in-depth knowledge of different aspects of human development in various stages of life.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** <u>Professional/academic knowledge and skills</u> a. Identify the developmental milestones in gross motor, fine motor, cognitive, psychosocial, speech and language functions. b. Describe the different factors that may affect overall lifespan development. c. Explain the typical changes in the musculoskeletal, cardiovascular, respiratory and nervous systems throughout the lifespan and their relationship to motor and functional development. d. Describe the different factors that may affect overall lifespan development.
Subject Synopsis/ Indicative Syllabus	• Theories of lifespan development • Principles of neuromotor development and motor control models • Sensorimotor, neuromuscular, perceptual, cognitive, psychosocial, and language development in different stages of life • Drug names & classification of drugs • Basic pharmacokinetics • Effect of medications on prenatal and childhood development • Sensory integration • Developmental milestones • Play and toy selection • Development of body systems in different stages of life • Aging • Palliative care, death, dying and bereavement
Teaching/Learning Methodology	Through a series of face-to-face interactive lectures and online lectures with use of multimedia, foundation knowledge of the main stages of development in neuromotor, psychosocial, cognitive and speech and language domains across the lifespan is introduced. Video presentations, role play, case-based discussions, interactive classes involving young/older adult subjects, and critical analysis of literature are included in the tutorials to reinforce and apply the concepts learned in the face-to-face and online lectures. Online tasks are incorporated to promote active learning.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed							
		a	b	c	d	e	f	g	h
Online tests	20	√	√	√	√				
Written tests	80	√	√	√	√				
Total	**100**								

Online tests: The tests are designed to facilitate observational and problem-solving skills through the use of video-based clinical scenarios, and scientific journal papers. Multiple choice questions are also used to assess the students' level of understanding of the online learning material.

Written tests: This aim of this assessment is to evaluate the student's understanding of the major concepts learned in the semester.

Student Study Effort Expected

Class contact:	***(42 Hrs.)***
▪ Lectures	16 Hrs.
▪ Online lectures	12 Hrs
▪ Labs	14 Hrs.
Other student study effort:	***(65 Hrs.)***
▪ Online tests	15 Hrs.
▪ Self-study	50 Hrs.
Total student study effort	**<u>107 Hrs.</u>**

Reading List and References

Berk LE. Exploring lifespan development. 4th ed. Hoboken, New Jersey: Pearson; 2018.

Boyd D, Bee H. Lifespan development. 8th ed. Harlow: Pearson; 2019.

Cech D, Martin S. Functional movement development across the lifespan. 3rd ed. Philadelphia, Pennsylvania: Elsevier, 2012.

Shumway-Cook A, Woollacott MH. Motor control: theory and practical applications. 2nd ed. Baltimore: Lippincott Williams & Wilkins; 2001.

Steinberg L. Lifespan development: infancy through adulthood. Belmont, CA: Wadsworth; 2011.

Subject Code	**RS5305**
Subject Title	**REHABILITATION PSYCHOLOGY**
Credit Value	3
Level	5
Pre-requisite / **Co-requisite/ Exclusion**	Nil
Objectives	This subject introduces the key psychosocial theories for understanding the processes of adjustment to trauma, disability, and illness. It also prepares students to examine their values of helping, to develop basic interviewing skills needed in building a helping relationship with clients, and to facilitate psychological adjustment in clients. Students are expected to develop competencies in communicating and understanding psychosocial issues of patients, and facilitate psychological and social adjustment when managing patients with physical and mental disabilities or chronic diseases.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: Professional/academic knowledge and skills a. demonstrate effective communication skills in interviewing a person with disabilities or chronic illness. b. evaluate the impact of trauma, disability, and chronic illness, by applying appropriate psychological theories. c. explain the principles and strategies the facilitation of psychosocial adjustment to illness or disability. d. recognize common with mental health issues in patients in the rehabilitation process. e. understand how rehabilitation interventions (esp. physiotherapy and occupational therapy) could facilitate the psychosocial well-being of persons with physical and/or mental health problems.
Subject Synopsis/ Indicative Syllabus	<u>Psychological Adjustment to Trauma, Disability, and Chronic Illness</u> 1. Psychological impact of trauma, disability, and chronic illness 2. Theories on psychological adjustment a) Stress and coping b) Body image and self-concept c) Loss, grief, and adjustment d) Self-efficacy and self-management 3. Aspects of psychosocial adaptation a) Social attitude toward persons with disabilities b) Vocational behaviour c) Family and social support d) Intimacy and sexuality 4. Psychological aspects of specific disorders • Developmental disabilities, e.g. learning disabilities, neuromuscular disorders • Physical disabilities, e.g. stroke, spinal cord injuries • Chronic illness, e.g. rheumatoid arthritis, diabetes <u>The Helping Relationship and Interviewing Skills</u> 1. The therapeutic relationship 2. Personal values, impression management and helping 3. Effective communication and interviewing skills: listening, asking, and guiding skills and collaborative action planning <u>Mental Health Issues in Rehabilitation</u> 1. Attitude towards psychiatric illness

	2. Commonly seen emotional and psychiatric disorders in rehabilitation a) Anxiety and adjustment disorders b) Mood disorders c) Substance abuse 5. Role of rehabilitation health care professionals (including physiotherapists and occupational therapists)'s role in handling psychological issues in patients with physical disabilities or chronic diseases, and mental health issues.
Teaching/Learning Methodology	Lectures will cover the theory and principles of psychology adjustment and adaptation to disabilities and chronic illnesses, illustrated with video shows and case studies. During tutorials sessions, students will be guided to analyse based on video clips of interviews of patients, or conduct live interviews with persons with disability in class. Using written exercises and role plays, students will practice interviewing skills. Disability awareness exercise are used to help student reflect on their own attitude toward persons with disabilities and their acceptance toward them.
Assessment Methods in Alignment with Intended Learning Outcomes	See table below. **Multiple choice quizzes** to examine students' knowledge on theories of psychological adjustment and social adaptation to health conditions and disabilities, covering all topics in the subject. **Seminar presentation** This is a group project in which students conduct interview with a person with chronic illness or disability. They need to conduct a case analysis of client's psychological adjustment and community adaptation, and then present it during a seminar. **Interviewing Skills Assessment** Students are required to demonstrate their competence in basic patient interviewing skills in short online written assignments, and in a role play assessment. During role play assessment, student will take turn to perform role play as interviewer and patients according to case information. We would assess student's interviewing skills based on their performance as interviewers in the role play.

Specific assessment methods/ tasks	% weighting	Intended subject learning outcomes to be assessed				
		a	b	c	d	e
Multiple choice quizzes	50	✓	✓	✓	✓	✓
Case Seminar presentation	30	✓	✓	✓		
Interviewing Skills Assessment	20	✓	✓			
Total	**100 %**					

Student Study Effort Expected	
Class contact:	***(40 Hrs.)***
▪ Lectures	26 Hrs.
▪ Tutorials/practicals	14 Hrs.
Other student study effort:	***(65 Hrs.)***
▪ Interview with patients	5 Hrs.
▪ Group discussion/preparation of seminar presentation	25 Hrs.
▪ Written assignment	10 Hrs.
▪ Self-study	25 Hrs.
Total student study effort	**105 Hrs.**
Reading List and Reerences	**Key texts** Egan, G., & Reese, R.J. (2018). *The skilled helper: a problem-management and opportunity-development approach to helping*. (11th ed.) Belmont, CA USA: Cengage Learning.

Martz, E, & Livheh, H. (Eds.). (2007). *Coping with chronic illness and disability: Theoretical, empirical, and clinical aspects*. New York: Springer.

References

Chan, Fong, Berven, Norman L., & Thomas, Kenneth R., (Eds.) (2015). Counseling theories and techniques for rehabilitation and mental health professionals, (2nd ed.). Sl: Springer Publishing Company.

DeVellis, B. M., & DeVellis, R. F. (2001). Self-efficacy and health. In R. G. Frank (Ed). Rehabilitation. In A. Baum, T. A. Revenson, & J. E. Singer (Eds.) Handbook of health psychology (pp.235-247). NJ, USA: Lawrence Erlbaum.

Drench, M. E., Noonan, A. C., Sharby, N., Ventura, S. H. (2007). Psychosocial aspects of health care. (3rd ed.). Upper Saddle River, NJ, USA: Pearson Prentice Hall.

Frank, R.G, Rosenthal, M., & Caplan, B. (Eds.) (2010). Handbook of rehabilitation psychology (2nd Ed.). Washington, DC, USA: American Psychological Association.

Glover-Graf, N. N., Millington, M., & Marini, I. (2011). Psychosocial Aspects of Disability: Insider Perspectives and Strategies for Counselors. USA: Springer.

Gutman, S. A. (2005). Living with illness or disability: 10 lessons of acceptance, understanding, and perseverance. AOTA Press, The American Occupational Therapy Association, Inc. Livneh, H., & Antonak, R. F. (2005). Psychosocial adaptation to chronic illness and disability: A primer for counselors. Journal of Counseling & Development, 83(1), 12-20.

Robertson, S. E. & Brown, R. I. (1997). Rehabilitation counselling: Approaches in the field of disability (2nd Ed.). Cheltenham, England: Stanley Thornes.

Rollnick, S., Miller, W. R., & Butler, C. (2008). Motivational interviewing in health care: helping patients change behavior. Guilford Press.

江瓊珠 《是我又如何：十八位長期病患者的抗病經歷》香港：香港復康會社區復康網絡，1999 年。

Subject Code	**RS5306**
Subject Title	**MOVEMENT SCIENCE**
Credit Value	3
Level	5
Pre-requisite / **Co-requisite/ Exclusion**	Nil
Objectives	1. To develop a keen interest in students to human biomechanics and kinesiology (and science in general) which will encourage independent, continuing learning after completion of this subject. 2. Encourage students' critical thinking and their use of investigative technique in pursuing knowledge in movement science. 3. To enhance communication skills through tutorial discussions and presentations. 4. To appreciate the importance of evidence-based practice.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** a. Understand the biomechanics and kinesiology of the human musculoskeletal system. b. Learn the biomechanical properties of the various tissues of the musculoskeletal system. c. Analyze movements of the body using sound anatomical and biomechanical principles. d. Analyze the biomechanical mechanisms underlying musculoskeletal disorders and their treatment. e. Apply the principles of kinesiology in clinical decision-making in physiotherapy practice.
Subject Synopsis/ Indicative Syllabus	a. Definitions of biomechanical terms and body mechanics. b. Material and structural properties of musculoskeletal tissues. c. Joint integrity and mobility. d. Muscle performance, functional role, strength, power and endurance, muscle tension, length/speed/tension relationship, and electromyography. e. Motor function and motor control. f. Posture (static and dynamic). g. Walking gait, locomotion and balance. h. Introduction to prosthetic device, alignment and functional design.
Teaching/Learning Methodology	Lecture: mainly in didactic format to introduce the theories and concepts of movement science with some introductory pathology on muscles and joints. Tutorial: Through interactive learning, group discussions and presentations, students

will be able to develop a deeper understanding of the lecture materials. They will also be able to develop their communication and language skills during discussion and presentations.

Laboratory: There are laboratory sessions in which the students will appreciate the applicability of the theories taught in lectures. They will conduct the practicals in groups and learn to communicate, and work as a team to collect data and critically analyze the data collected.

Written test: The test will involve different formats of MCQ, short responses and essays. Students will need to develop their comprehensive and writing skills in each of the components.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed				
		a	b	c	d	e
Mid-term test	40	√	√	√		
Final test	60	√	√	√	√	√
Total	**100**					

Assessments are in the form of multiple choice questions, short responses to questions and short essays. The questions are based on the concepts and theories of human movement science in order to achieve the learning outcomes.

Student Study Effort Expected

Class contact:	***(44 Hrs.)***
▪ Lectures	22 Hrs.
▪ Tutorial/ Laboratory	22 Hrs.
Other student study effort:	***(86 hrs.)***
▪ Self-study	60 Hrs.
▪ Preparation for tutorial and practical	26 Hrs.
Total student study effort	**130 Hrs.**

Reading List and References

Levangie PK and Norkin CC (2011) *Joint Structure and Function: A Comprehensive Analysis.* 5th ed., Philadelphia: F.A. Davis Company.

Nordin M and Frankel VH (2012). *Basic Biomechanics of the Musculoskeletal System.* 4th ed., Philadelphia: Lippincott Williams and Wilkins.

Subject Code	**RS5307**
Subject Title	**EXERCISE SCIENCE**
Credit Value	3
Level	5
Pre-requisite / **Co-requisite/ Exclusion**	Nil
Objectives	The overall objective of this subject is to equip students with the knowledge and skills of exercise sciences for health and fitness promotion, injury prevention and rehabilitation of musculoskeletal injuries across the life span.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** Professional/academic knowledge and skills a. present the role of physiotherapy in applying the knowledge of exercise sciences for health and fitness promotion, injury prevention and rehabilitation of musculoskeletal injuries across the life span. b. elaborate increased knowledge in exercise physiology, specifically of the acute physiological changes and long-term adaptations of the body systems to exercise and inactivity, and to evaluate the effects of exercise on growth, development and the ageing process. c. apply the physiological principles of exercise to individuals representing different life stages as well as to individuals representing special populations; integrate the principles of exercise training and modification of training methods for different age groups and to address different needs, i.e., exercise for health promotion, for injury prevention or for performance enhancement; and to apply the principles of group exercise programs to meet the health needs of special populations, e.g., for pregnancy, children, older athletes, people with chronic conditions - diabetes, osteoporosis, cardiac, respiratory, asthma, hypertension and rehabilitation of the injured population. Attributes for all-roundedness a. communicate effectively in oral and written English when presenting/expressing information and ideas to colleagues and patients, and develop personal skills to function as responsible and effective members in a team. b. develop an active and healthy life style and develop values and attitudes appropriate to a profession committed to meeting the health care needs of the society. c. develop problem-solving strategies by extracting and analysing relevant information, formulating an hypothesis and evaluating outcomes, and reading scientific and professional literature in order to apply relevant findings to physiotherapy practice and acquire the skills essential for life-long learning.

Subject Synopsis/ Indicative Syllabus	1. Introduction of the physiotherapy perspective in health and fitness promotion. • Physiotherapy input to preventative, health promotional and rehabilitative exercise and recreational activity in the normal population and in those with specific conditions (emphasis on local scenario, demands and inadequacies). 2. Principles of exercise physiology • Cardiovascular, respiratory, neuromuscular, metabolic, and thermal responses to exercise • Biochemistry of exercise • Acute and chronic adaptations to exercise • Nutrition and ergogenic aids in exercise • Environmental considerations for exercise 3. Application of physiological principles in health promotion • Concept of physical fitness and fitness testing • Physiological principles in conditioning and training • Training methods o Aerobic training o Anaerobic training o Strength and power training o Speed and agility training o Specific skill training o Flexibility training o Training and recovery o Over training, s/s, role of physiotherapy o Muscle pain, fatigue and DOMS 4. Application of physiological and exercise principles for the special population • Children and adolescents o Physical development and characteristics o Growth and musculoskeletal development o Body composition o Cardiorespiratory system development o Responses to exercises and adaptations to training o Chronic childhood illness and exercises participation (e.g. Asthma) o Special issues (e.g. weight training and distance running for children) • Female population o Gender differences o Pre- and postpubertal differences o Muscle performance - power, strength and endurance

- Cardiovascular system - vo2 max
- Menstrual cycle

- Elderly population
  - Adaptations based on aging of body systems
  - Value of physical fitness
  - Essential elements of physical fitness for the elderly
- People with chronic diseases
  - Exercise needs for people with chronic diseases
  - Physiological responses/adaptations to physical activity
  - Risk factors/ precautions/contraindications prior to participation in physical activity
  - Define ways to monitor and evaluate the effectiveness of the program

5. Application of physiological principles in rehabilitation
   - Effects of inactivity and immobilization
   - Physiological principles of exercise prescription in rehabilitation
   - Biomechanical principles of exercise prescription in rehabilitation
   - Mode of exercise in rehabilitation
   - Functional progress in rehabilitation
   - Aquatic exercises in rehabilitation

6. Application of physiological principles in sports specific training skills.

Teaching/Learning Methodology

An integrative learning approach is used which makes use of problem solving and case studies to allow students to integrate knowledge and skills gained in other subjects with that of exercise science. Students apply the physiological principles of exercise in order to use exercise as a means for health promotion, injury prevention or to enhance performance for individuals from different populations (e.g. children and adolescents, elderly, females, people with chronic conditions) and life stages.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed					
		a	b	c	d	e	f
Exercise log book	15			√	√	√	√
Seminar presentation & written assignment	25	√	√	√	√	√	√
Written tests	60	√	√	√		√	√
Total	**100 %**						

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

	Exercise log book: Students acquire and consolidate their knowledge in exercise science through learning by participation. In conjunction with the lectures, laboratory activities and tutorials, students decide their own exercise training schedule and adhere to their training schedule for 6 weeks. This learning-through-participation approach allows in-depth understanding, and aims to develop an active and healthy life style such that they will pursuit exercise lifelong attitudes and role models and leaders in exercise participation in the community. **Seminar presentation**: This assessment aims to provide an opportunity for students to search for information on a particular topic related to exercise science, to present information and ideas in an organized manner, express and defend an opinion and function as a responsible group member. **Written assignment**: This assessment aims to provide an opportunity for students to present their review topic in a well structured and succinct manner. **Written tests**: Both MCQ and essay questions are used in the written tests. MCQ tests are used to test the students' ability to recall the key elements of exercise sciences. Essay question aims to test the students' ability to integrate and synthesise the content knowledge of exercise science and apply it in different scenarios.	
Student Study Effort Expected	***Class contact:***	***(46 Hrs.)***
	▪ Lecture	22 Hrs.
	▪ Tutorial/seminar	12 Hrs.
	▪ Laboratory/practical	12 Hrs.
	Other student study effort:	***(85 Hrs.)***
	▪ Journal and textbook readings	45 Hrs.
	▪ Preparation of seminar presentation, tests and written assignments	40 Hrs.
	Total student study effort	**<u>131 Hrs.</u>**
Reading List and References	**<u>Required Texts:</u>** McArdle WD, Katch FI, Katch VL (2007). *Exercise Physiology: Energy, Nutrition and Human Performance. 6th ed*. Baltimore: William and Wilkins. Thompson WR, et al. (2010) *ACSM's guidelines for exercise testing and prescription*. 8th edition, Lippincott William & Wilkins **<u>Recommended Reading:</u>** Durstine JL, et al. (2009) *ACSM's Exercise management for persons with chronic diseases and disabilities*. 3rd edition. Human Kinetic. Kisner C, Colby LA (2007) *Therapeutic exercise: Foundations and Techniques* 5th edition, Philadelphia: FA Davis Co.	

Subject Code	**RS5308**
Subject Title	**FUNCTIONAL ANATOMY**
Credit Value	2
Level	5
Pre-requisite / Co-requisite/ Exclusion	Nil
Objectives	By completing this subject, the students will be able to demonstrate an understanding of structures of human body and apply the anatomy knowledge to clinical practice in functional perspectives.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. identify the gross structures of the human body using skeletons, plastic models, cadavers, and living models. b. identify the connective tissue structures supporting joints. c. integrate joint movements and the muscles which produce them. d. identify accurately bony and soft tissue structures of the human body. e. analyze the relevant anatomical structures involved given a particular brief case study. f. synthesize patterns of muscle weakness/paralysis and/or sensory loss based on the segmental and peripheral distribution of the normal body's nerve supply and apply anatomy knowledge in functional perspectives of the human body.
Subject Synopsis/ Indicative Syllabus	<u>Overview of the Body</u> • The systems of neurology, osteology, and mycology will be introduced. • Focus includes anatomical terminology and descriptive terms, arrangement of the skeletons, gross structure and classification of bones, classification and function of joints and muscles and the regional distribution of nerves and blood vessels. <u>Regional Study:</u> • Lower Limb and Pelvis • Upper Limb and Shoulder Girdle • Trunk, Head & Neck <u>Regional Study:</u> • Overview of regions of the brain and introduction to neuroanatomy (cranial nerves, their functions and pathways)
Teaching/Learning Methodology	Through lectures, independent and group-study, students will gain a basic knowledge of the structure of the human body, focusing on the functional perspectives of the musculoskeletal and neurology systems. Required pre-readings will introduce the terminology, organization, and relevant development, structure and function of the systems or regions of the body under study each week. Lecture

format is used to provide overviews of the structures underlying the systems and regions of the body, to clarify difficult concepts involving these structures and to provide brief case studies which highlight the relevance of anatomical knowledge in rehabilitation. In laboratory sessions, a variety of educational media (e.g., skeletons, cadaver prosections, models, reference materials, multimedia self-learning packages) are used to enhance learning. Students will be expected to complete pre-readings prior to the laboratory sessions so that they can participate actively in the learning process. Also, to that end, students will teach small portions of lab materials to their peers on occasion. The remainder of laboratory material is learned via instructor-facilitated, independent and/or small group study.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
		a	b	c	d	e	f
Continuous assessment	60	√	√	√	√	√	
Examination	40	√	√	√	√	√	√
Total	**100**						

Continuous assessment

A variety of assessment tools will be used, the students can achieve the intended learning outcomes through the multiple choices and labeling questions in quizzes; body structures identification in the laboratory test; and integration of knowledge related to joint movements and muscle functions in student-led peer teaching.

Examination

Final examination (40%) – through multiple choice questions and case-related questions which will assess all of the intended learning outcomes for the subject and specifically will be checking their ability in applying anatomy knowledge in functional perspectives of the human body.

Student Study Effort Expected

Class contact:	***(46 Hrs.)***
▪ Lecture	10 Hrs.
▪ Laboratory	36 Hrs.
Other student study effort:	***(90 Hrs.)***
▪ Independent study and peer teaching preparation	30 Hrs.
▪ Preparation for continuous assessment and examination	60 Hrs.
Total student study effort	**136 Hrs.**

Reading List and References

Agur AMR, Dalley AF (2013) *Grant's Atlas of Anatomy, 15th ed.* Philadelphia: Lippincott Williams & Wilkins.

Moore KL, Dalley AF, Agur AMR (2014) *Clinically Oriented Anatomy, 8th ed.* Philadelphia: Lippincott Williams & Wilkins.

Subject Code	**RS5310**
Subject Title	**PRINCIPLES OF PHYSIOTHERAPY PRACTICE**
Credit Value	3
Level	5
Co-requisite	RS5308 Functional Anatomy
Objectives	1. Highlight principles and establish framework for practice in physiotherapy. 2. Develop knowledge and skills in basic physical assessment and exercise to promote health, to prevent injury/disability as well as to remedy specific clinical problems.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** <u>Professional/academic knowledge and skills</u> a. Identify components of the decision-making process in the practice of physiotherapy. b. Apply basic principles of measurement theory and testing to assessment procedures (e.g. use of standardized measures). c. Observe and perform fundamental tests for the assessment of physical function. d. Using observational skills, recognize the range of normal performance and appreciate individual variations. e. Apply the principles of communication to interview and instruct subjects. f. Integrate the principles of exercise to design a progressive activity/exercise program. g. Teach and instruct subjects in physical activities and selected exercise programs, applying principles from current theories of teaching and motor learning. h. Select the mode of exercise (including intensity, frequency, duration) for an intervention (e.g., to promote physical fitness, to prevent injury/disability or to remediate an identified clinical problem. i. Document observations (e.g. normal movement patterns) and measurement findings. j. Demonstrate selected "patient care" skills (e.g. ambulation with assistive device). <u>Attributes for all-roundedness</u> a. Reflect on personal performance to relate how knowledge learned is applied in real life situation. b. Practice effective interpersonal communication (written, oral, non-verbal) by seeking and providing feedback on performance. c. Read and summarize information from the professional literature.
Subject Synopsis/ Indicative Syllabus	<u>Factors and Attributes Affecting Function</u> e.g., sensation, balance, medical, environmental <u>Analysis of Movement by Observation</u>

- Body build and shape
- Posture
- Gait
- Transfer, mobility, transitional movement
- Physical dysfunction in health and disease
- Functional activities at different life stages (young and old; healthy and diseased)

Principle and Skills of Physiotherapy Practice - Assessment

- Communication (interviewing, documentation, information retrieval)
- Reasoning, judgment and decision-making
- Visual inspection/observation (body build, posture)
- Palpation of bony and soft tissue landmarks
- Measurement
    - Joint range - goniometry
    - Muscle strength - manual muscle testing, hand-held dynamometer
    - Seating/ positioning
    - Transitional movements
    - Balance
    - Posture
    - Gait
- Patient status (vital signs, mobility, physical condition/activity-level)

Principle and Skills of Physiotherapy Practice - Intervention

- Motor learning (Psychomotor Skill Development)
- Patient care skills
    - Transfer
    - Turning and positioning
    - Wheelchair prescription
    - Ambulation with assistive devices
- Teach Activity/Exercise
    - Types of contractions (isometric, isotonic, concentric, eccentric, isokinetics)
    - Types of movement (passive, active, active-assisted, active-resisted (gravity, water, manual/therapist, equipment). Equipment: springs, pulleys, weights, theraband
    - Components: individual movements, activity/exercise, programme to increase
        - Range of motion, flexibility
        - Postural
        - Strength
        - Endurance
        - Power
        - Assisted gait pattern
        - Transitional movement (e.g. transfer from chair-to-chair)

<table>
<tr><td></td><td>

- Documentation. (e.g., body chart, assessment forms)

</td></tr>
<tr><td>Teaching/Learning Methodology</td><td>A blended learning approach will be used. Online and face-to-face lectures are used to highlight principles and to establish the framework for practice in physiotherapy. In laboratory and practical sessions, students consolidate skills in physical assessment and exercise prescription, after viewing the online video clips prior to classes. Learning activities in the testing of muscles and joints are organized using a regional approach that is complementary to the subject, Functional Anatomy (RS5308). Activity/exercise is explored as an intervention to promote health, to prevent injury/disability as well as to remedy specific clinical problems.</td></tr>
<tr><td>Assessment Methods in Alignment with Intended Learning Outcomes</td><td>

<table>
<tr><td rowspan="2">Specific assessment methods/tasks</td><td rowspan="2">% weighting</td><td colspan="13">Intended subject learning outcomes to be assessed</td></tr>
<tr><td>a</td><td>b</td><td>c</td><td>d</td><td>e</td><td>f</td><td>g</td><td>h</td><td>i</td><td>j</td><td>k</td><td>l</td><td>m</td></tr>
<tr><td>Written (MCQ) test</td><td>40</td><td>√</td><td>√</td><td></td><td></td><td></td><td>√</td><td></td><td>√</td><td>√</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Practical tests</td><td>60</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td></tr>
<tr><td>Total</td><td>100</td><td colspan="13"></td></tr>
</table>

Written test (MCQ): Aims to assess students' understanding of knowledge/theory, framework and clinical reasoning in basic physiotherapy practice.

Practical test: The ability of students to integrate and translate theory into safe and effective practice in preparation for clinical practice is assessed through practical tests.

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<tr><td>Student Study Effort Expected</td><td>

<table>
<tr><td>Class contact:</td><td>(50 Hrs.)</td></tr>
<tr><td>▪ Lecture</td><td>6Hrs.</td></tr>
<tr><td>▪ Laboratory/Practical</td><td>44Hrs.</td></tr>
<tr><td>Other student study effort:</td><td>(53 Hrs.)</td></tr>
<tr><td>▪ Online lectures</td><td>6Hrs.</td></tr>
<tr><td>▪ Online pre-practical materials</td><td>11Hrs.</td></tr>
<tr><td>▪ Self-study for written test</td><td>12Hrs.</td></tr>
<tr><td>▪ Self-study for practical test</td><td>24Hrs.</td></tr>
<tr><td>Total student study effort</td><td><u>103Hrs.</u></td></tr>
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Reading List and References	**Required Text:** For Assessment: Clarkson HM (2013). *Musculoskeletal Assessment - Joint Range of Motion and Manual Muscle Strength*. 3rd ed. Philadelphia. Lippincott Williams & Wilkins. For activity/ exercise/ Interventions: Kisner C and Colby L A (2007). *Therapeutic Exercise. Foundations and Techniques*. 5th ed. Philadelphia. F. A. Davis Company. (Selected learning material and guidelines for different topics are provided in class). **Recommended Reading:** For measurement issues: Rothestein JM, Echternach JL (1993). *Primer in Measurement.* Alexandria, VA: American Physical Therapy Association For activity/ exercise/ Interventions: American College of Sports Medicine (2009). *ACSM's Guidelines for Exercise Testing and Prescription.* 6th ed. Baltimore: Lippincott Williams & Wilkins. For palpation: Tixa S (2007). *Atlas of surface palpation: Anatomy of the Neck, Trunk, Upper and Lower Limbs* (Netter Basic Science). Churchill Livingstone Elsevier.

Subject Code	**RS5311**
Subject Title	**MUSCULOSKELETAL PHYSIOTHERAPY I**
Credit Value	4
Level	5
Pre-requisite	RS5301 Orthopaedics and Traumatology
Objectives	The overall objective of the series Musculoskeletal Physiotherapy is to provide students with theories, skills and clinical application for musculoskeletal physiotherapy practice. This subject focuses on developing competencies of physiotherapy professional practice in the areas of assessment, clinical reasoning, diagnosis and treatment selection of musculoskeletal dysfunction. This subject incorporates (i) the regional assessment and management of musculoskeletal problems of the peripheral joints; and (ii) the overall integration of physiotherapy modalities including the principles and practice of therapeutic exercises and manual therapy. Interventions for common conditions including soft tissue, joint, bony lesions and common surgical interventions will be covered.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** Professional/academic knowledge and skills a. integrate knowledge of the process of injury/disease with dysfunction of the musculoskeletal system to determine a physical diagnosis within the scope of physiotherapy. b. undertake an appropriate subjective examination of a patient identifying appropriate signs and symptoms. c. undertake an appropriate physical examination guided by the subjective examination. d. extract relevant information from the examination and formulate an hypothesis for clinical decision making. e. select and apply manipulative and exercise therapy techniques in a safe, effective and ethical manner. f. document an accurate clinical record based on a given format. g. design a total plan of care that includes the full-range of physiotherapeutic interventions (e.g. mobilisation, exercises, electrophysical modalities) taking into consideration the nature and the pathology of the clinical problem and the needs of the patient. Clinical settings at the secondary and tertiary levels of care may include acute care hospitals to outpatient (ambulatory care) settings. h. review the effectiveness of therapeutic interventions relating to the outcome of short and long term plans. Attributes for all-roundedness a. develop problem-solving strategies by extracting and analyzing relevant information, formulation of hypothesis and evaluation of outcome. b. communicate effectively when presenting/expressing information and ideas to colleagues and patients. c. develop skills essential for independent study and life-long learning.

	d. develop values and attitudes appropriate to a profession committed to meeting the health care needs of the society. e. develop personal skills to function as a responsible and effective member of a team. f. read scientific and professional literature in order to apply relevant findings to physiotherapy practice.
Subject Synopsis/ Indicative Syllabus	1. Principles and Concepts ▪ Concept of diagnosis in physiotherapy - physical vs. medical diagnosis ▪ Clinical reasoning - characteristics and process ▪ Clinical decision making - cue acquisition, hypothesis generation, data interpretation and hypothesis evaluation ▪ Principles of intervention of selected pathologies that affect joints, soft tissue, connective tissue and bone: o Characteristics and clinical signs/symptoms of arthritis; design rehabilitation programs to address impairments associated with the condition o Stages of soft tissue/connective tissue healing process; characteristics and clinical signs/symptoms of inflammatory, reparative and remodeling phase, design rehabilitation programs that are appropriate for the stages of healing o Stages of fracture healing; principles of management for fracture during the period of immobilization and post-immobilization o Indications of surgical interventions for musculoskeletal pathology (joint replacement and common orthopaedic post-operative conditions); guidelines for preoperative and postoperative rehabilitation; interventions to prevent potential post-operative complications associated with surgery o Physiological changes associated with bedrest; physiotherapy interventions to prevent the adverse effects associated with bedrest ▪ Concepts of radiological imaging; normal anatomy and common pathology on musculoskeletal imaging procedures such as X-rays, computed tomography and magnetic resonance imaging. 2. Assessment a. Conduct patient interview (subjective examination) and review pertinent medical records including: ▪ general demographics ▪ chief complaints (use of body chart) ▪ behavior of symptoms (including irritability, severity and 24-hour pattern) ▪ functional status and activity level ▪ current and past history ▪ general health status ▪ medical/surgical history ▪ medications ▪ family and social history ▪ living environment ▪ employment ▪ social health habits ▪ patient/client's perception of problems and needs

	▪ precautionary questions to rule out symptoms arising from systems other than the musculoskeletal system ▪ other clinical tests (review imaging, laboratory reports, available records and other clinical findings) b. Conduct physical examination pertaining to the musculoskeletal system that includes: ▪ posture (static and dynamic) ▪ bed mobility, transfer, gait, and balance ▪ use of assistive devices and equipment ▪ functional activities and limitations ▪ active range of motion ▪ passive physiological and accessory joint movements (for joint integrity, mobility and joint play movements) ▪ ligament laxity tests ▪ muscle performance (strength, power and endurance) ▪ muscle length and soft tissue extensibility ▪ functional tests ▪ palpation ▪ 'when applicable' tests ▪ screening tests 3. Diagnosis and Plan of care ▪ analyze and interpret examination/assessment findings ▪ synthesize available information and generate a working hypothesis ▪ recognize signs and symptoms that are beyond the scope of physiotherapy practice ▪ integrate examination findings to determine the physical diagnosis of the patient/client (in terms of human movement dysfunction) ▪ identify and prioritize impairments to determine a specific dysfunction towards which the intervention will be directed ▪ determine the prognosis and time required for improvement in patient/client function ▪ determine short-term and long-term goals for treatment ▪ select and prioritize treatment intervention ▪ evaluate the effectiveness of intervention ▪ progress treatment intervention in response to the patient/client's status ▪ establish criteria for discharge based on patient/client's goals and functional status ▪ use of evidence-based outcome measures ▪ discharge plan ▪ documentation ▪ recognition of precautions and contraindications to physical examination and treatment (manual therapy and exercise therapy) 4. Treatment Intervention a. Prescription and application of therapeutic exercises including: ▪ muscle strength, power and endurance training (active-assistive, active, resistive including isometric, isotonic, concentric, eccentric and plyometric)

- flexibility exercises (tissue extensibility, prevention of contractures)
- sensory training or retraining
- ambulation skills including choice of assistive devices and gait-retraining
- functional training in self-care and home management (e.g. bed mobility, transfer, ADL training)
- balance, co-ordination and training of functional or sports-specific activities
- task-specific performance training

b. Prescription and application of manual therapy techniques including:

- manipulative therapy skills - passive physiological and accessory joint mobilization
- scar massage or soft tissue mobilization
- therapeutic massage

c. Prescription and application of mechanical modalities including:

- compression therapy – e.g. compression bandages
- mechanical motion device – e.g. continuous passive motion
- protective and supportive devices – e.g. splints, braces

5. Patient/client related instruction

- injury prevention education
- education, advice and training of patients/clients and caregivers

Teaching/Learning Methodology

A student-centered learning approach is used with a combination of lectures, tutorials/seminars and self-directed learning methods. A case-based learning approach is adopted for the overall integration of theoretical knowledge, different therapeutic modalities and skills. The clinical cases will reflect problems across the life span that address psychosocial and environmental factors and examine underlying physiological responses to inactivity or trauma etc. Students are guided in the development of their assessment, problem-solving and treatment skills in physiotherapy management. In clinical laboratory sessions, students focus on the development and application of skills in assessment and treatment techniques. To consolidate and reinforce what the students have learnt in classrooms, bedside teaching activities are organized in clinical settings.

Other activities to promote self-directed learning include open laboratory session.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed												
		a	b	c	d	e	f	g	h	i	j	k	l	m	n
Written test	40	√			√	√	√		√	√				√	
Seminar presentation	20	√			√			√	√	√	√	√	√		√
Practical test	40	√	√	√	√	√			√	√	√		√	√	
Total	**100**														

Written test: The aim of this assessment is to evaluate the student's understanding of the principles and concepts of musculoskeletal assessment and treatment intervention.

Seminar presentation: This assessment aims to provide the opportunity for students to develop and/or refine their ability to search for information on a designated topic, to develop skills in presenting information and ideas in an organized manner, to express

<table>
<tr><td></td><td colspan="2">and defend an opinion and function as a responsible group member.

Practical test: This assessment component aims to evaluate students' clinical skills competence, and application of their knowledge to the planning of examination and treatment.</td></tr>
<tr><td rowspan="8">Student Study Effort Expected</td><td>Class contact:</td><td>(84 Hrs.)</td></tr>
<tr><td>▪ Lecture</td><td>18 Hrs.</td></tr>
<tr><td>▪ Tutorial/Seminars</td><td>12 Hrs.</td></tr>
<tr><td>▪ Laboratory/Practical</td><td>54 Hrs.</td></tr>
<tr><td>Other student study effort:</td><td>(62 Hrs.)</td></tr>
<tr><td>▪ Self-study</td><td>42 Hrs.</td></tr>
<tr><td>▪ Seminar preparation</td><td>20 Hrs.</td></tr>
<tr><td>Total student study effort</td><td><u>146 Hrs.</u></td></tr>
<tr><td>Reading List and References</td><td colspan="2"><u>Required Text:</u>

Kisner C, Colby LA (2007). Therapeutic Exercise: Foundations and Techniques.5th ed. Philadelphia: FA Davis Co.

Magee DJ (2008). Orthopaedic Physical Assessment. 5th ed. Philadelphia: WB Saunders.

Maitland GD (2005). Peripheral Manipulation. 4th ed. London: Butterworth-Heinemann.

<u>Recommended Reading:</u>

Atkinson K, Coutts F, Hassenkamp A-M (2005). Physiotherapy in Orthopaedics: A Problem-Solving Approach. 2nd ed., Edinburgh: Churchill Livingstone

Henegeveld E, Banks K (2005). Maitland's Peripheral Manipulation. 4th ed. London: Butterworth-Heinemann.

Magee DJ, Zachazewski JE, Quillen WS (2007). Scientific Foundations and Principles of Practice in Musculoskeletal Rehabilitation. Philadelphia: WB Saunders.

Magee DJ, Zachazewski JE, Quillen WS (2009). Pathology and Intervention in Musculoskeletal Rehabilitation. Philadelphia: WB Saunders.

Maxey L, Magnusson J (2006). Rehabilitation for the Postsurgical Orthopedic Patient - Procedures and Guidelines, 2nd ed., Mosby Co.

Other relevant journal articles and texts will be recommended as appropriate.</td></tr>
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Subject Code	**RS5312**
Subject Title	**MUSCULOSKELETAL PHYSIOTHERAPY II**
Credit Value	5
Level	5
Pre-requisite	RS5311 Musculoskeletal Physiotherapy I RS5314 Electrophysical Therapy I
Objectives	a. A student-centred learning focus is used to empower students' ability to identify and treat clinical problems that are associated with disorders of the musculoskeletal system relating to the hand, the spine and amputation. b. Problem-based and case-based learning will be used to enable students to appreciate the role of physiotherapist in primary, secondary and tertiary care settings in managing disorders of the musculoskeletal system relating to the hand, the spine and amputation. c. Concepts of occupational health and ergonomic consideration will be introduced in managing disorders of the musculoskeletal system relating to the hand, the spine and amputation.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. search knowledge on medication and information on the etiology and disease process of some common musculoskeletal disorders related to the spine, hand and amputation . b. extract, interpret and hypothesize on clinical findings through the use of subjective examination, objective tests, measurement scales and other secondary information such as medical imaging and surgical management to determine a physical diagnosis within the scope of physiotherapy. c. design and implement manipulative techniques and exercise therapy, with maximum and appropriate level of safety, effectiveness, efficiency and ethical standards and evaluate its outcome. d. document and communicate relevant findings and the treatment programme, as appropriate. e. Concept of primary, secondary and tertiary care and to utilize the concept to promote health in the community.
Subject Synopsis/ Indicative Syllabus	1. Principles and concepts 2. Acquire and Conduct physical examination pertaining to the hand, the spine and amputation that includes: Generate physiotherapy Diagnosis and treatment plan 3. Deliver physiotherapeutic treatment intervention using manual therapy and exercise therapy 4. Patient/client self-management concepts in the community setting as well as hospital out-patients.

Teaching/Learning Methodology

1. Lecture,
2. Web-based clinical cases
3. Practical laboratory
4. Seminar
5. Tutorials

A student-centred learning focus is used to identify and treat clinical problems that are associated with disorders of the musculoskeletal system relating to the hand, the spine and amputation. Principles and concepts are introduced in lectures and subsequently reinforced through guided learning in tutorials and laboratories with clinical reasoning and demonstration sessions. Seminars help to develop the integration of principles and practice in the use of manipulative techniques and other therapeutic modalities in near and long-term management. Throughout, students are guided to identify and critically appraise the evidence underlying the rationale and practice of different treatment techniques, drawing from recent articles in various fields (e.g., epidemiology, images). Students must integrate this knowledge to develop methods to educate their clients and the public, at large, in disease/injury prevention and health promotion in the community setting as well as hospital environment.

In addition, "e-platform" has been developed which facilitates students' clinical reasoning skill.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)				
		a	b	c	d	e
Written Assignment	10	√				
Clinical Reasoning Test	30	√	√		√	
Practical Tests	40			√		
Seminar Presentation	20					√
Total	**100**					

Written and clinical reasoning test are directed towards assessing students' ability on clinical reasoning. From the information provided on the cases, students are expected to extract and analysis relevant information, identify problems, provide an appropriate treatment plan, and suggest appropriate PT intervention.

Students' clinical skills are being evaluated during and at the end of the semester. All manipulative and exercises therapy skills being taught will be examined.

Seminar presentation aims to provide students an opportunity to have a deeper exploration on a selected topic, to extract information from journal articles, and to share information and ideas in an organized manner.

Student Study Effort Expected	***Class contact:***	***(98 Hrs.)***
	▪ Lecture	14 Hrs.
	▪ Tutorial	22 Hrs.
	▪ Laboratory	56 Hrs
	▪ Seminar	6 Hrs
	Other student study effort:	***(75 Hrs.)***
	▪ Web-based clinical cases	25 Hrs.
	▪ Self-reading & practice	50 Hrs.
	Total student study effort	**173 Hrs.**
Reading List and References	**Required Texts:** Engstrom B; van der Ven, Catherine (1999) *Therapy for Amputees. 3rd Edition.* Edinburgh: Churchill Livingstone. Magee DJ (2008). *Orthopaedic Physical Assessment. 5rd ed*. Philadelphia: WB Saunders. Maitland GD (2000). *Vertebral Manipulation. 5th ed*. London: Butterworth-Heinemann. **Recommended Reading:** Grant R (2002). *Physical therapy of the cervical and thoracic spine. 3nd ed.* New York: Churchill Livingstone Butler DS (2000). *The Sensitive Nervous System.* Noigroup Publication, Australia McGill S (2007). *Low Back Disorders.* Human Kinetics, NZ Note: other relevant journal articles and texts will be recommended as appropriate.	

Subject Code	**RS5313**
Subject Title	**MANIPULATIVE PHYSIOTHERAPY**
Credit Value	2
Level	5
Pre-requisite	RS5311 Musculoskeletal Physiotherapy I RS5312 Musculoskeletal Physiotherapy II
Objectives	In Students can identify and practice the recent developments and perspectives in manipulative therapy approaches in interactive lectures. To develop students' ability to critically appraise the evaluation, rationale and efficacy of these different approaches in tutorials and seminars.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: 1. integrate knowledge from a range of manipulative approaches into their clinical reasoning model for the assessment and management of neuro-musculoskeletal problems 2. synthesize knowledge on the principles, safe and effective application of manipulative therapy approaches in the examination and treatment of neuro-musculoskeletal disorders. 3. critically appraise the rationale and efficacy of manipulative therapy approaches and treatment strategies. 4. apply and evaluate the effect of appropriate manipulative physiotherapy techniques to the spinal and peripheral joints in the management of a variety of neuro-musculoskeletal problems. 5. assessing patients and making rational decisions regarding physiotherapeutic approaches to treatment, through a logical clinical reasoning process. 6. identify and apply different measurement tools for the evaluation of treatment outcomes. 7. communicate effectively with patients and other health professionals
Subject Synopsis/ Indicative Syllabus	**1. <u>Learning</u>** • Integrate knowledge from a range of manipulative approaches into their clinical reasoning model for the assessment and management of neuro-musculoskeletal problems ▪ Apply and evaluate the effect of appropriate manipulative physiotherapy techniques to the spinal and peripheral joints in the management of a variety of neuro-musculoskeletal problems • Identify and apply different measurement tools for the evaluation of treatment outcomes. • Communicate effectively with patients and other health professionals **2. <u>Strategies</u>** ▪ A problem-orientated approach with case studies is adopted to enhance the overall integration and consolidation of the theory and practice of manipulative therapy Problem-based learning in clinical reasoning and decision making

- An inquiry-based approach is used and students learn to actively apply theories into practice and the essential skills.

3. <u>Physiotherapist Practice</u>

a. Assessment

- Use hypothetico-deductive strategies to determine the specific tests and measures.
- Introduce reliable and valid tests and measures.

b. Evaluation and Diagnosis

- Foumulate a Differential Physical Diagnosis with clinical reasoning in the form of case studies and clinical reasoning forum with experienced Manipulative Physiotherapists.

c. Plan of care /intervention and treatment

- Recent developments in manipulative therapy, including Neural Tissue Longitudinal Provocation Tests, Active muscle stabilization of spine and peripheral joints, Combine movements etc.
- Apply/demonstrate mobilisation techniques for the spinal and peripheral joints (thrust and nonthrust).
- Manipulative therapy perspectives: Traditional Chinese Manipulative Therapy, McKenzie approach & Mulligan's techniques etc.

d. Evidence Based Practice

- Critically evaluate sources of information related to manual therapy.
- Consistently integrate the best evidence for practice from sources of information with clinical judgment

Teaching/Learning Methodology

A problem-orientated approach with case studies is adopted to enhance the overall integration and consolidation of the theory and practice of musculoskeletal therapy. In practical sessions, an inquiry-based approach is used and students learn to actively apply theories into practice and the essential skills. VCDs are used to facilitate the application of manipulative therapeutic techniques. A subject-specific website has been developed to allow students' access to teaching material and discussion of issues relating to the subject is encouraged via the 'Discussion Forum'. Frequently asked questions are also posted on the website for student reference.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						
		a	b	c	d	e	f	g
1 Clinical Reasoning Test.	40	√	√	√		√		√
2. Practical Examination	60	√	√		√	√		
Total	**100**							

Clinical Reasoning Test: This assessment aims to assess students' understanding of theory, pathology, and management of people with musculoskeletal dysfunctions.

	Practical Examination: This assessment aims to evaluate students' clinical reasoning, selection of evaluation and treatment choice and skills in managing simulated patients with common musculoskeletal dysfunctions.	
Student Study Effort Expected	***Class contact:***	**(36 Hrs.)**
	▪ Lecture/Tutorial/Seminar	20 Hrs.
	▪ Practical	16 Hrs.
	Other student study effort:	**(35 Hrs.)**
	▪ Reading/Self-practice	35 Hrs.
	Total student study effort	**71 Hrs.**
Reading List and References	**Required Texts:** Butler DS (2000). *The Sensitive Nervous System*. Noigroup Publications, Australia Maitland GD (2005). *Peripheral Manipulation*. *4th ed*. London: Butterworths. Maitland GD (2001). *Maitland's Vertebral Manipulation*. *6th ed.* London: Butterworths. Higgs J, Jones M (2008). *Clinical Reasoning in the Health Professions*. *3rd ed*. Edinburgh: Elsevier Churchill Livingstone, **Recommended Reading:** Grant R (2002). *Physical therapy of the cervical and thoracic spine. 3rd ed.* New York: Churchill Livingstone Twomey LT, Taylor JR (2000). *Physical therapy of the low back. 3rd ed*. New York: Churchill Livingstone Boyling JD, (2004). ***Grieve's modern manual therapy: the vertebral column***. *3rd ed*. Edinburgh: Churchill Livingstone Deutsch, J. E, Anderson E Z (2008) Complementary therapies for physical therapy: a clinical decision-making approach. Journal articles appropriate to the topics are recommended in class.	

Subject Code	**RS5314**
Subject Title	**ELECTROPHYSICAL THERAPY I**
Credit Value	3
Level	5
Pre-requisite / **Co-requisite/ Exclusion**	Nil
Objectives	Students will understand the theoretical knowledge and the practical application of electrophysical agents for managing patients with disorders and injuries to the musculoskeletal system.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** <u>Professional/academic knowledge and skills</u> a. integrate knowledge of physics, anatomy and physiology to select and apply the appropriate thermal and/or neuromuscular electrical stimulation agent(s) for treatment of various musculoskeletal conditions. b. understand the biophysical and therapeutic effects of thermal agents and neuromuscular electrical stimulation agents on body tissues, covering all the common musculoskeletal injuries. c. select and apply the most appropriate thermal agent and/or neuromuscular electrical stimulation agent for an individual case in a safe, effective and efficient manner. d. evaluate and prioritise the effectiveness of different electrophysical agents, and modify the method as appropriate. e. document and interpret details of treatment, modifications and patient's response. f. critically appraise and synthesise information from scientific and professional literature on various aspects of physical and electrical agents. The concept of evidence-based practice applicable to the use of electrotherapy will be fostered. <u>Attributes for all-roundedness</u> g. enhance language proficiency by reading reference materials and writing a report in academic writing style h. enhance communication and interaction by practicing how to interview patients and give instructions to patients about electrophysical therapy i. acquire problem-solving skills in order to make clinical decisions on how to select various modalities, determine dosage and method of applications for the different case types presented. j. personal and professional ethics are emphasized in ensuring safety measures are taken and patient confidentiality and privacy are respected.
Subject Synopsis/ Indicative Syllabus	1. Principles and concepts of biophysical, physiological and therapeutic effects of thermal agents and neuromuscular electrical stimulation agents applied to body tissues, covering all the common musculoskeletal injuries. 2. Selection and methods of application of appropriate thermal agent(s) and/or neuromuscular electrical stimulation agent(s) in a safe, effective and efficient

manner.

3. Electrophysical therapy agents covered include:
   - Superficial thermal agents – hot packs, paraffin baths, dry heat
   - Deep thermal agents – shortwave diathermy
   - Cryotherapy- cold packs, ice massage, vapocoolant spray
   - Ultrasound therapy – application using gel, water as medium,
   - Electrical stimulation (sensory) – transcutaneous electrical stimulation (TENS) and interferential therapy (IFT) for pain management
   - Electrical stimulation (motor) – neuromuscular electrical stimulation using low-frequency and medium frequency currents (IFT and Russian current),
4. Principles of evaluation of treatment effects, and the application of a clinical reasoning approach to modify or progress the treatment method and dosage as appropriate.
5. Documentation and interpretation of details of treatment, modifications and patient's response.
6. Integration of electrophysical therapy into the overall physiotherapy management approach for musculoskeletal disorders and injuries.
7. Learning to read and synthesise information from scientific and professional literature on various aspects of physical and electrical agents. The concept of evidence-based practice, with respect to the use of electrotherapy, will be fostered.

Teaching/Learning Methodology

An interactive learning approach is used in this subject, and teaching content is integrated horizontally with other related subjects taught in this semester, such as Principles of Physiotherapy Practice and Musculoskeletal Physiotherapy I. Through a series of interactive lectures, students learn about the theoretical knowledge involved in the production and application of electrophysical therapy agents, as part of the PT management of musculoskeletal injuries/dysfunctions. In the practical classes, students learn to perform practical procedures in applying these EPT modalities to the relevant parts of the human body to simulate treatment of musculoskeletal injuries. Tutorials are organised to help students to review and integrate their knowledge. A subject-specific website is developed to enhance interactive learning and provide supplementary information to students. "Open" laboratory sessions are organised to encourage independent learning and revision.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed									
		a	b	c	d	e	f	g	h	i	j
Written Test	40	√	√	√						√	√
Written Assignment	10	√	√				√	√		√	√
Practical Test	50		√	√	√	√			√	√	√
Total	**100 %**										

Written test Students will be tested on all aspects of theoretical knowledge on EPT modalities for musculoskeletal disorders.

Written assignment requires the students to conduct a literature search for a specific musculoskeletal patient scenario (under guidance) and learn to appreciate the research evidence for electrotherapy.

	Practical test requires the student to perform applications of various modalities and to evaluate their ability to conduct this procedure in a safe, professional and effective manner.	
Student Study Effort Expected	***Class contact:***	***(56 Hrs.)***
	▪ Lectures	26 Hrs.
	▪ Practical /tutorial classes	30 Hrs.
	Other student study effort:	***(50 Hrs.)***
	▪ Literature review and written assignment	30 Hrs.
	▪ Open lab – self practice	20 Hrs.
	Total student study effort	**106Hrs.**
Reading List and References	Robertson V., Ward A., Low J. (2006). *Electrotherapy Explained: Principles and Practice*,4th Ed.Edinburgh: Butterworth Heinemann, Elsevier. Watson, Tim (2008). *Electrotherapy E-Book: Evidence-Based Practice*. Long: Elsevier Health Sciences. Belanger AY. (2009). *Therapeutic Electrophysical Agents: Evidence Behind Practice. 2nd ed.* Baltimore: Lippincott Williams & Wilkins. Michlovitz, S., Bellew, J. and Nolan, T. (2016). *Modalities for Therapeutic Intervention*. 6th ed. Philadelphia: F.A. Davis Company. Knight, K. and Draper, D. (2013). *Therapeutic Modalities: the Art and Science*. 2nd Edition. Philadelphia: Lippincott Williams & Wilkins.	

Subject Code	**RS5315**
Subject Title	**ELECTROPHYSICAL THERAPY II**
Credit Value	2
Level	5
Pre-requisite	RS5314 Electrophysical Therapy I
Objectives	Students will acquire the knowledge and skills necessary to manage clinical conditions by effective use of electrophysical modalities including microcurrent, pulsed electromagnetic field, biofeedback, laser, ultraviolet radiation, and functional electrical nerve stimulation etc.
Intended Learning Outcomes	***On successful completion of the subject, given a clinical problem or a case history, a student will be able to:*** Professional/academic knowledge and skills a. apply knowledge of physics, anatomy and physiology to the effective use of microcurrent, pulsed electromagnetic field, biofeedback, laser, and ultraviolet radiation, functional electrical nerve stimulation, and electrical stimulation for managing neurological conditions. b. understand the biophysical and therapeutic effects of various electrophysical agents in performing electrodiagnosis, pain modulation, wound management and integumentary repair using electrophysical modalities reducing edema and promoting nerve repair. c. compare and contrast the electrophysical agents in terms of physical properties, therapeutic effects, and versatility in clinical applications, and potential health benefits or hazards. d. select and apply the most appropriate electrophysical agent safely, effectively and efficiently. e. discuss the rationale and/or evidence supporting the selection of a given electrophysical modality. f. evaluate the outcome of different applications and modify methods as needed. g. document details of treatment parameters, modifications and patient response. h. introduce the contemporary trend of clinical use of electrophysical agents. Attributes for all-roundedness a. practise effective communication skills by explaining treatment effects to patients, or the progress of treatment to other health professionals. b. develop problem-solving strategies by extracting and analyzing information from

	written reports and patients, then make appropriate clinical decision on treatment planning c. develop professional values and attitudes d. aware of the safety issues of delivering treatment to patients
Subject Synopsis/ Indicative Syllabus	1. Principles and concepts of biophysical, physiological and therapeutic effects of electrophysical agents 2. Selection and administration of the most appropriate electrophysical agents: a. Stimulation of afferent nerve including microcurrent, acupuncture and electroacupuncture b. Electrical stimulation for neurological conditions for reducing spasticity, treating shoulder subluxation, reducing drop foot phenomenon in hemiplegic patients and managing Bell's Palsy c. Laser therapy for soft tissue injuries and wound healing d. Pulsed electromagnetic field for managing musculoskeletal conditions e. Biofeedback for muscle relaxation and re-education f. Ultraviolet radiation for managing skin condition and promote wound healing g. Newly developed treatment modalities including extracorporeal shock wave therapy, monochromatic infrared irradiation, polychromatic light therapy 3. Evaluation and electrodiagnosis: a. Biofeedback for research and evaluation of treatment outcomes b. Contemporary electrical evaluation techniques such as strength duration curve, nerve conduction test, clinical electromyography (EMG) c. Consideration for clinical application, data acquisition, normal and abnormal findings 4. Clinical applications & decision making Students will be able to formulate the plan of care underpinned by clinical reasoning, and understand the rationale behind the selection of electrophysical modalities, treatment parameters, progression of treatment and their integration of electrophysical therapy into the overall physiotherapy treatment plan for patients. 5. Recording of treatment methods, parameters and clinical outcomes 6. Evaluation and modification of the treatment for achieving optimal treatment efficacy 7. Integration of best evidence-based physiotherapy in the application of electrotherapeutic agents
Teaching/Learning Methodology	Lectures provide the opportunity for students to learn the theoretical background of electrophysical modalities.

Practical sessions and tutorials allow students to develop the skills necessary to apply various electrophysical modalities safely, effectively and efficiently. They will learn how to choose the correct treatment parameters for:

- microcurrent
- laser therapy
- biofeedback
- pulsed electromagnetic field
- ultraviolet radiation
- functional electrical stimulation

Self-directed learning encourages students to review the subject content and practice the skills that they have learned.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed									
		a	b	c	d	e	f	g	h	i	j	k
Written test	50	√	√	√	√				√			
Practical test	50	√		√	√	√	√	√		√	√	√
Self–directed learning	-	√	√	√	√	√	√	√	√			
Total	**100**											

Written test: Students will be tested on the theoretical background about the biophysical and therapeutic effects of various electrophysical agents in performing electrodiagnosis, pain modulation, wound management, reducing edema and promoting nerve repair

Practical test: Given a clinical case, students are required to demonstrate clinical reasoning in selecting appropriate electrophysical modality and treatment parameters, then demonstrate the technique and skills to apply electrophyscial modalities in an effective and safe manner.

Self-directed learning encourages students to review the subject content and practice the skills that they have learned.

Student Study Effort Expected

Class contact:	***(34 Hrs.)***
▪ Lecture	14 Hrs.
▪ Tutorial	2 Hrs.
▪ Practical/ Laboratory	18 Hrs.
Other student study effort:	***(36 Hrs.)***
▪ Self–directed learning	36 Hrs
Total student study effort	**70 Hrs.**

Reading List and

Recommended Reading:

References	Belanger AY. (2009). *Therapeutic Electrophysical Agents: Evidence Behind Practice. 2nd ed.* Baltimore: Lippincott Williams & Wilkins. Cameron M H (2008). *Physical Agents in Rehabilitation: From research to practice*. 3rd *ed*, Philadelphia: Saunders. Robertson V., Ward A., Low J, Reed A. (2006). *Electrotherapy Explained: Principles and Practice,4th ed.* Butterworth Heinemann, Elsevier. Watson T (2008). *Electrotherapy: Evidence-based practice. 12th ed.* Edinburgh: Churchill Livingstone.

Subject Code	**RS5316**
Subject Title	**CARDIORESPIRATORY PHYSIOTHERAPY**
Credit Value	5
Level	5
Pre-requisite / Co-requisite/ Exclusion	Nil
Objectives	*This subject aims to prepare the student with the ability to:* - interpret medical records and accurately perform a physiotherapy assessment to identify problems in patients with cardiopulmonary disorders - explain the pathophysiology and create an awareness of the current management strategies for common cardiopulmonary conditions particular to specific age groups (children/adolescents and adults) - formulate and implement a holistic intervention plan for patients with cardiopulmonary disorders - communicate effectively with clients and other professionals in the rehabilitation team, both orally and in writing - understand the fundamental role of a cardiopulmonary physiotherapist from health promotion through to patient management in critical care - maximize the potential of clients in promotion of quality of life - achieve best evidence practice in cardiopulmonary techniques through the process of critical evidential analysis
Intended Learning Outcomes	Upon completion of the subject, students will be able to: ***Professional/academic knowledge and skills*** a. Apply principles of functional anatomy and applied physiology of the cardiopulmonary system to different cardiopulmonary conditions. b. Differentiate structural and functional differences in the anatomy and applied physiology of the paediatric and adult cardiopulmonary systems. c. Conduct a systems review for screening the cardiovascular and pulmonary systems and other major systems (integumentary, musculoskeletal and neurological) d. Integrate the epidemiology, predisposing factors, aetiology and clinical features of some common respiratory and cardiovascular conditions affecting neonates, children and adults. e. Interpret investigatory reports related to cardiopulmonary disorders. f. Appreciate the effects of common respiratory and cardiovascular drugs on patient rehabilitation. g. Synthesise appropriate hypotheses from the presenting clinical signs and symptoms to enable a physiotherapeutic diagnosis.

	h. Critically analyse the evidence supporting a clinical decision i. Prioritise major problems identified in patients and implement an effective physiotherapy programme during both the acute and rehabilitative stages of the respiratory and/or cardiac disorder. j. Supervise simple exercise testing procedures for health maintenance and improvement of cardiovascular or cardiorespiratory fitness k. Able to educate patients regarding secondary prevention of cardiovascular and cardiorespiratory dysfunction l. Appropriately select and safely apply cardiopulmonary physiotherapy interventions during secondary and tertiary care m. Design and coordinate an effective pulmonary and/or cardiac rehabilitation programme in the hospital or community setting. n. Critically analyse an individual client/patient's response to a physiotherapeutic intervention. o. Recognise ventilatory circuits and monitoring equipment used in critical care units. p. Appreciate the effect of TENS over acupuncture points in cardiovascular and respiratory systems. ***Attributes for all-roundedness*** a. communicate effectively in English, both written and verbally, with patients/clients, patients' relatives or carers, colleagues and other medical or allied professions, b. develop personal skills to function as a responsible and effective member in a team, c. develop problem-solving strategies by extracting and analysing relevant information from clients, d. develop values and attitudes appropriate to a profession, e. recognise social demands for health care services in the community, f. develop an ability to critically evaluate indices of provided services, g. develop an ability to engage in evidence-based practice.
Subject Synopsis/ Indicative Syllabus	Review of a. Functional anatomy of the respiratory and cardiovascular systems b. Applied physiology of the respiratory and cardiovascular systems General management of common cardiopulmonary disorders a. Medical respiratory conditions Chronic airflow limitation (asthma, chronic bronchitis, emphysema); pneumonia; infectious respiratory disease (acquired immune deficiency syndrome (AIDS), tuberculosis); suppurative disease (bronchiectasis, cystic fibrosis); pleural diseases; occupational lung diseases; lung tumours; adult respiratory distress syndrome (ARDS) b. Surgical respiratory, cardiovascular and abdominal conditions Thoracoscopy, video-assisted thoracoscopy, open thoracic surgery, laparoscopy and abdominal surgery. c. Paediatric respiratory conditions Pneumonia, asthma, bronchiolitis, bronchitis, infant respiratory distress

	syndrome (IRDS). d. Cardio-vascular conditions Cardiac failure, valvular disease, ischaemic heart disease, coronary care, pulmonary and systemic hypertension, congenital heart conditions, cardiopulmonary transplantation e. Peripheral vascular diseases Raynaud's disease, Buerger's disease, varicose veins and ulcers, deep venous thrombosis, vascular surgery f. Introduction to anaesthesia and analgesia and the methods of administration Cardiopulmonary physiotherapy in acute and rehabilitative care a. Examination and assessment of the respiratory system (including 6MWT, BODE index) b. Introduction to chest X-ray interpretation c. Principles of physiotherapy interventions d. Specific treatment techniques (including ACBT, percussion, vibration, positioning, suctioning, thoracic exercise, pursed lip breathing, sustained maximal inspiration, manual hyperinflation) e. Planning and design of programmes for appropriate intervention f. Oxygen therapy and humidification, oxygen toxicity g. Role of physiotherapy in acute pain management h. Physiotherapy assessment/intervention for post-surgical patients i. Physiotherapy assessment/intervention for patients with acute burns j. Role of physiotherapy in Pulmonary Rehabilitation k. Role of physiotherapy in Cardiac Rehabilitation l. Principles of exercise tests and exercise prescription m. Role of cardiopulmonary physiotherapy in health promotion and primary care in the community Role of physiotherapy in the intensive care unit (ICU) a. Introduction to organisation and management of the ICU b. Introduction to the general management of the critically ill in the ICU c. Equipment and monitoring devices used in the ICU d. Physiotherapy controlled ventilation e. Care of the patients with mechanical ventilation f. Social-psychological impact on patient and family g. Social-psychological impact of ICU work on the physiotherapists
Teaching/Learning Methodology	A clinical decision-making approach is used to identify and treat clinical problems that are associated with disorders of the cardiopulmonary system. Interactive lectures will be delivered to highlight essential concepts required for the understanding of this subject. Videos, demonstration of techniques and short quizzes will also be used during lectures. Role play as well as discussion will be the main features of most tutorial sessions. Tutorials will usually be based on a clinical case to enhance understanding of the problems encountered by clinicians. 1. Lectures will cover the knowledge base of cardiovascular and respiratory systems

reviews, pathophysiology and principles of management for common cardiopulmonary conditions, and current management strategies (medical, pharmacological and surgical) for cardiopulmonary conditions.

2. In tutorials sessions, students will discuss clinical reasoning, appraise best evidence-based practice, and outcome measures relevant to current cardiopulmonary physiotherapy.

3. In practical sessions, students will learn assessment and treatment skills and the rationale for selecting a particular treatment/technique.

* Pre-requisite for practical test: 90% attendance of laboratory/ practical/ tutorial sessions

Assessment Methods in Alignment with Intended Learning Outcomes

		Intended subject learning outcomes to be assessed (Please tick as appropriate)																				
Specific assessment methods/tasks	% weight-ing	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
Short-clinical question paper	30	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Practical test	30	√	√	√	√		√		√		√	√		√	√	√		√				√
MCQ	40	√	√	√	√	√	√	√	√	√		√	√	√	√	√		√			√	√
Total	**100**																					

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

Written test: This assessment aims to, based on hospital notes of a patient, evaluate students' ability to identify the problems encountered by the patients, propose an intervention plan with justification to maximize the patients recovery of cardiopulmonary dysfunction.

Practical test: This assessment aims to evaluate students' clinical reasoning, selection of evaluation and treatment choice and skills in managing patients with simulated cardiopulmonary problems

MCQ test: This assessment aims to assess students' understanding of theory, pathology, laboratory investigations and management of people with cardiopulmonary dysfunction

Student Study Effort Expected

Class contact:	***(82 Hrs.)***
▪ Lecture	48 Hrs
▪ Laboratory	34 Hrs
Other student study effort:	***(100 Hrs)***
▪ Self-study	70 Hrs
▪ Practice of skills	30 Hrs
Total student study effort	**182 Hrs.**

Reading List and References

Required Texts:

Main E and Denehy L (2016). Cardiorespiratory Physiotherapy. Adults and Paediatrics. 5th Edition. Italy: Elsevier.

Corne J, Pointon K (2016). Chest X-ray made easy. 4th Edition. China: Elsevier.

Hampton JR (2013). *The ECG made easy*. 8th Edition. Edinburgh: Churchill Livingstone.

	Recommended Reading: West J B, Luks AM (2016). West's Respiratory Physiology-The Formatted: Strikethrough Essentials. 10th Edition. China: Wolters Kluwer. ACSM (2013). *ACSM's Guidelines for exercise testing and prescription*. 9th ed. American College of Sports Medicine. Philadelphia: Lippincott Williams & Wilkins. Bourke SJ (2011). *Lecture Notes: Respiratory Medicine.* 8th ed. Malden, Mass: Blackwell Publishing. Gray H, Dawkins K, Morgan J, Simpson I (2008). *Lecture Notes. Cardiology.* 5th ed. Malden, Mass: Blackwell Publishing Kenyon J and Kenyon K (2004). *The Physiotherapist's Pocket Book*. Churchill Livingstone. McArdle WD, Katch FI & Katch VL (2006). *Essentials of Exercise Physiology*. 3rd ed. Baltimore, Md: Lippincott Williams & Wilkins.

Subject Code	**RS5317**
Subject Title	**PEDIATRIC NEUROLOGY AND DEVELOPMENTAL DISABILITIES**
Credit Value	3
Level	5
Pre-requisite	RS5302 Clinical Neuroscience and Neurology
Objectives	1. Identify, assess, analyze, plan and manage the multiplicity of problems associated with pediatric neurological dysfunction and developmental disabilities in primary, secondary and tertiary care. 2. Integrate and apply motor learning and contemporary approaches to the treatment of motor control-related problems in children. 3. Taking into context the whole child, select and apply appropriate handling skills and educationally-relevant therapeutic skills to assist the child's sensor-motor development and learning. 4. Collaborate with caregivers and other member of pediatric developmental teams to assist children in their natural settings (e.g. schools and homes), and to emphasize the need for the overall balanced development of young clients as individuals, and the need for planning for their future.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** <u>Professional/academic knowledge and skills</u> a. Integrate knowledge of pathology and developmental milestones to determine the functional status, activity and participation levels of children. b. Implement age-appropriate assessment (including standardized tests) to identify physical, sensori-motor, attention, arousal status and cognitive function of the child within the scope of practice of physiotherapy. c. Design age-appropriate therapeutic play activities. d. Formulate management priorities using a clinical decision-making process and best evidence available. e. Integrate therapy into an individualized educational plan for the child within the multi-disciplinary framework, including: • Developmental and therapeutic exercises to enhance perception, balance, posture, transitional/transfer movement and locomotion • Self-care and upper limb function • Use of assistive devices, prosthetics & orthotics, and mobility aids • Instrumental activity of daily living • Oral-motor function and speech • Educate care-givers in home therapy and injury prevention. f. Project habilitation or rehabilitation pathway as appropriate, with reference to: • Functional status

	• Living environment • Work, employment, leisure and safety g. Implement and monitor a physiotherapy plan to ensure best functional outcome. h. Critique various management approaches based on published studies. i. Recommend community service and resources for the individual child. j. Identification of children with special education needs, and the promotion of their integration into mainstream education. <u>Attributes for all-roundedness</u> a. Work and communicate effectively as a team member with children, their caregivers and/ or their families. b. Apply problem-solving strategies regarding the paediatric services for a given child. c. Seek feedback on professional performance from team members.
Subject Synopsis/ Indicative Syllabus	1. <u>Principles and Concepts</u> • Conceptual framework for pediatric physiotherapy • International Classification of Function, Disability, and Health (ICF) • Clinical reasoning and decision process • Principles of assessment and management • Holistic approach of assessment and management with consideration of all body systems and environmental factors. 2. <u>Assessment</u> • Plan a developmental age-appropriate assessment • Interview parents/caregiver and extract relevant history of the child • Select and conduct tests (including standardized test) in accordance with areas of concern of child & parents 3. <u>Diagnosis and Plan of Care</u> • Analyze, interpret and synthesize assessment findings • Determine the functional status and participation level of child • Identify factors affecting function, treatment outcome and prognosis • Prioritize short-term and long-term treatment goals • Set functional measurable goals and specific treatment plans • Determine an individualized and educational-relevant care plan that incorporate child-centre and family-centre concepts • Evaluate effectiveness of treatment • Progress treatment intervention • Project prognosis and “habilitation” and “rehabilitation” pathway • Use of evidence-based outcome measures • Provide accurate documentation • Recognize signs and symptoms of developmental problems or complications

	4. Treatment Intervention Principles and applications of: • physiologically based stretchings • sensorimotor facilitation • appropriate play and toys for free or designed play/ play group • preventive measures • teaching caregivers • paediatric aids and equipment, etc. o Mobility aids such as walking aids, scooters, modified bicycles etc o Positioning equipment such as standing frames, wheelchairs, buggies, pressure relief cushions, sleep system etc o Alternative communication devices • Intensive physiotherapy programmes for pre- and post-selective surgery and special medical interventions. • Prosthetics & Orthotics o inhibitory casting o ankle-foot orthosis o prophylactic support and splintage o corrective splintage, etc. • Adaptive equipment and mobility aids o standing frames, buggies, scooters, wheelchairs, workboards, tilt tables, etc • Integrating physiotherapy programmes within the daily routine of the child • Conductive education/learning (Peto) • Bobath/Neurodevelopmental therapy (NDT) • Proprioceptive neuromuscular facilitation (Voss, Knott) • Sensorimotor facilitation techniques • Technologically-based and electrically-powered assistances in cases of severe and multiple handicaps. • Selected electrotherapy-based assistance o Functional electrical stimulation (FES) o Biofeedback (EMG). • Clinical gait analysis and Harness weight-support for gait training (Barbeau) 5. Child/family related instruction and education Community services and resources for individual child.
Teaching/Learning Methodology	Guided by reading references, students will integrate knowledge of diseases of the neurological system and developmental disabilities into the physiotherapy management of clinical problems (e.g. transitional movement, coordination). Following analysis of clinical problems, students will identify and prioritize a problem list, select and apply appropriate handling skills and educationally-relevant therapeutic skills to assist the sensorimotor development and learning of children. Content knowledge and practical skills will be extended in the area of motor learning, and several contemporary approaches to the treatment of motor control-related problems will be introduced. Inclusion of caregivers,

families and other members of the pediatric developmental teams in assisting children with special needs in their natural settings (e.g. schools and homes) will be discussed in tutorials. The need for an overall balanced development of the young clients as individuals with plans projecting into the future will be emphasized. A student-centered learning approach is used in lectures, tutorials, seminars, practicals and video presentations. Guided by clinical physiotherapists in various paediatric settings, students will have "hands-on" practice in the assessment and management of children, and in the holistic management of a given child condition.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed											
		a	b	c	d	e	f	g	h	i	j	k	l	m
Written assignment	50	√	√	√		√	√	√	√	√	√		√	
Practical Test	30		√	√	√	√	√	√	√				√	
Seminar presentation	20	√	√	√	√	√	√	√	√	√	√	√	√	√
Total	**100**													

Written assignment: aims to evaluate students' ability to search relevant evidence, to critically analyze on existing evidence on clinical-related topics and how to implement the evidence within the scope of physiotherapy practice.

Practical test aims to evaluate students' ability to draw relevant findings from clinical examination, prioritize problems, prescribe an intervention according to the problem and how to progress the intervention.

Seminar presentation Assesses the students' ability to draw upon their experience in interacting with children during clinical attachments, to synthesize information, to reflect and present the decision-making process and the skills required in assessing and managing a given child's condition, with short and long term planning and projection into the future.

Student Study Effort Expected

Class contact:	***(50 Hrs.)***
▪ Lecture	24Hrs
▪ Tutorial/Laboratory	20Hrs
▪ Seminar	2Hrs
▪ Fieldwork	4Hrs
Other student study effort:	***(60 Hrs.)***
▪ Preparation of written assignment	35Hrs
▪ Preparation of seminar presentation	10Hrs
▪ Self-study	15Hrs
Total student study effort	**110 Hrs.**

Reading List and References

Required Texts:

Long TM & Toscano K (2002). Handbook of pediatric physical therapy. *Philadelphia: Lippincott Williams & Wilkins.*

Tecklin J S (2008). Pediatric physical therapy *(4rd Edition) Philadelphia: Lippincott Williams Wilkins.*

	Provided in Class: World Health Organization (1993). *Promoting the Development of Young Children with Cerebral Palsy.* Geneva, Switzerland: World Health Organization (WHO). **Recommended Reading:** (Notification of selected parts for reading will be provided prior to respective classes) Campbell SK. Ed (1999). Decision Making in Pediatric Neurologic Physical Therapy. Philadelphia, Pennsylvania: Churchill Livingstone. Campell SK, Vanden Linden DW, Palisanno RJ. (2005). Physical Therapy for Children. Philadelphia, Pennsylvania: W.B. Saunders Company, 3rd ed. Shumway-Cook A, Woollacott MH (2007). Motor Control: Translating Research into Clinical Practice. Baltimore, Maryland: Lippincott Williams & Wilkins, 3rd ed. Kurtz LA, Dowrick PW, Levy SE, Batshaw ML (1995). Handbook of Developmental Disabilities. Gaithersburg, Maryland: Aspen Publishers, Inc. Mak Rose HL, Lam Catherine CC, Ho Cherri CY, Wong May MY (ed). (2006). A Premier in Common Developmental Disabilities: experience at Child Assessment Service, Hong Kong. Child Assessment Service, Department of Health, Hong Kong Special Administrative Region Government C W Chan et al. (eds.). Manual of Child Neurology (1999). The Hong Kong Society of Child Neurology & Developmental Paediatrics. Icon Media Co.: Authors. Gallahue KL and Ozmun JC (1998*). Understanding motor development: Infants, children, adolescents and adults* (4th ed.) Boston: McGraw-Hill.

Subject Code	**RS5318**
Subject Title	**NEUROLOGICAL PHYSIOTHERAPY I**
Credit Value	3
Level	5
Pre-requisite	RS5302 Clinical Neuroscience and Neurology
Objectives	This subject is designed to achieve the competence and clinical skills in neuro-rehabilitation for an entry level physiotherapist.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** Professional/academic knowledge and skills a. describe the pathophysiology, medical, pharmacological, and surgical management of common neurological conditions b. apply the principles of neuroplasticity, motor control and motor learning to the physiotherapy management of neurological dysfunction. c. identify problems of the patient that are within the scope of physiotherapy, using a clinical decision-making process. d. select, implement and/or interpret the findings of validated outcome measures. e. design a comprehensive plan of care that incorporates the principles of patient- and /or family-centered care, including goals which have been agreed to by the patient. f. implement, modify and progress the physiotherapy plan to ensure the best functional outcome. g. integrate the physiotherapy plan of care for neurological patients within an inter-disciplinary holistic framework. h. critically evaluate published studies on the rationale and scientific evidence for given techniques/technology, and to apply relevant findings to physiotherapy practice, research and education. Attributes for all-roundedness a. practice effective interpersonal communication (i.e., written, oral, nonverbal) by seeking and providing feedback on professional performance. b. reflect on personal performance in the decision-making process and in the application of technical procedures.
Subject Synopsis/ Indicative Syllabus	1. Principles of holistic management of individuals with neurological impairment • Application of neuroplasticity and neurophysiology to neuro-rehabilitation • Application of motor learning principles to neuro-rehabilitation • Concept of International Classification of Functioning, Disability and Health (ICF) • Rehabilitation pathways including primary, secondary and tertiary care, extended care 2. General management of common neurological conditions, with respect to their -- • Definition

- Prevalence/incidence in Hong Kong/elsewhere
- Cause/etiology
- Clinical features/signs & symptoms
- Management of a specific condition (diagnostic tests, operative vs. non-operative management, common medications, complications/ limitations)
- Prognosis; time course; assessment and treatment

* Head injury

* Stroke

3. Assessment

a. Examine patients/clients by obtaining a history from them and from other relevant sources:

- General demographic
- Family history
- Social history
- Living environment (home and community, device and equipment)
- Environmental and home barriers
- Employment
- Functional status and activity level (current and premorbid functional status)
- Medical/surgical/neurological history
- Chief complaints
- Medications
- Medical/surgical treatment
- Laboratory and diagnostic tests (neuroimaging, electrophysiology)
- Fall history

b. Perform systematic assessment of:

- Neuromuscular system
- Sensory integrity and Perception
- Sensory integration
- Motor control, control of voluntary movement
- Muscle length, active and passive range of movement,
- Muscle strength
- Reflex integrity
- Muscle tone
- Hand function, dexterity
- Movement patterns
- Coordination and agility
- Posture
- Balance, gait and locomotion
- Function, ADL, IADL, self-care
- Arousal, consciousness, cognition, attention, recall

- Mental status, cognition
- Integrity of cranial and peripheral nerves
- Orthotic and assistive devices
- Home environment
- Work, community, and leisure re-integration

4. Diagnosis and plan of care

- Interpret and analyse the assessment findings
- Formulate a diagnosis utilizing a hypothesis-driven clinical decision making process to identify existing impairments, activity limitations, and participation restrictions
- Incorporate additional information from other professionals, as needed, in the diagnostic process
- Determine short- and long-term functional goals
- Address required functions
- Establish a treatment plan that is safe, effective and client-centered
- Prioritize treatment interventions
- Evaluate the effectiveness of treatment interventions
- Utilize reliable and valid outcome measures
- Progress/modify treatment interventions in response to client status
- Admission and discharge planning
- Data collection, analysis and reporting
- Documentation
- Interdisciplinary teamwork
- Collaboration and communication among team members
- Refer to another health practitioner if appropriate

5. Treatment interventions

Design and implementation of a physiotherapy treatment plan, based on scientific evidence, which integrates techniques/components from what some consider different 'approaches', for example:

- Motor Control 'systems'
- Motor relearning model
- Biomechanical principles
- Facilitation principles - Bobath/Neurodevelopmental therapy (NDT)/ Proprioceptive neuromuscular facilitation
- Constraint-induced therapy
- Harness body weight-support for gait training
- Movement control, Movement pattern training
- Flexibility exercises
- Coordination training
- Proprioception training
- Somatosensory training

- Practice of functional tasks
- Transfer training
- Gait and locomotion training
- Balance and fall prevention
- Gaze stabilization
- Posture, postural stabilization
- Chinese therapeutics: Tai Chi, acupuncture
- Technology Application - Functional electrical stimulation (FES), Biofeedback (EMG, electromyography), Prosthetics & Orthotics: Inhibitory casting, ankle-foot orthosis

6. Patient/client related instruction

- Education, advice and training of patients/clients and carers
- Level of communication and instruction

Teaching/Learning Methodology

Lectures will cover medical/ neurosurgerical management, neuroplasticity and motor-learning theories in neuro-rehabilitation. In seminars and tutorials sessions, students will discuss clinical reasoning, appraise evidence-based practice and outcome measures. In practical classes, students will learn assessment and treatment skills and the rationale of selecting these skills. There is also case-based clinical teaching enabling students to apply their theory and knowledge into clinical practice. Web-based learning allows students to learn and enhance their clinical problem ability at their own pace.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed									
		a	b	c	d	e	f	g	h	i	j
Written Test	50	√	√	√	√	√	√	√	√	√	√
Practical Test	35		√	√	√	√	√	√	√	√	√
Written Assignment	15		√	√	√	√	√	√	√	√	√
Total	**100**										

Written test: Aims to assess students' understanding of theory, pathology, and management of people with neurological dysfunctions

Practical test: Aims to evaluate students' clinical reasoning, selection of evaluation and treatment methods, and skills in managing simulated common neurological problems

Written assignment: Aims to evaluate students' ability to critically select relevant journal articles and appraise evidence-base physiotherapy practice in the area of neuro-rehabilitation

Student Study Effort Expected

Class contact:	***(60 Hrs.)***
▪ Lecture	18 Hrs.
▪ Tutorial/Seminar	6 Hrs.
▪ Laboratory	34 Hrs.

	▪ Clinical Teaching	2 Hrs.
	Other student study effort:	***(50 Hrs.)***
	▪ Self-study	20 Hrs.
	▪ Web-based activities	15 Hrs.
	▪ Preparation for seminar presentation	15 Hrs.
	Total student study effort	**<u>110 Hrs.</u>**
Reading List and References	Alder SS, Beckers D, Buck M (2000) *PNF in practice: An illustrated Guide*. *2nd ed.* Hong Kong: Springer. Edward S (2002). *Neurological Physiotherapy - A Problem Solving Approach*. *2nd ed*. Edinburgh: Churchill Livingstone. Bossoe Gjelsvik BE (2008) *The Bobath Concept in Adult Neurology. 1st ed.* New York: Thieme Raine S, Meadows L, Lynch-Ellerington M (2009) *Bobath Concept: Theory and Clinical Practice in Neurological Rehabilitation*. Iowa: Wley-Blackwell Publishing Co. Shumway-Cook, A. and Woollacott, M. (2012) *Motor Control – Translating Research into Clinical Practice 4th ed.* Baltimore: Lippincott Williams and Wilkins. Stokes M. Stack E (2006) Physical Management in Neurological Rehabilitation. 2nd ed. Churchill Livingstone: Elsevier Stokes M. Stack E (2011) Physical Management in Neurological Rehabilitation. 3rd ed. Churchill Livingstone: Elsevier

Subject Code	**RS5319**
Subject Title	**NEUROLOGICAL PHYSIOTHERAPY II**
Credit Value	3
Level	5
Pre-requisite	RS5302 Clinical Neuroscience and Neurology RS5318 Neurological Physiotherapy I
Objectives	To achieve the competence and clinical skills in neuro-rehabilitation necessary for an entry level physiotherapist.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** <u>Professional/academic knowledge and skills</u> a. Discuss the plan of care, intervention, treatment efficacy and expected outcomes for commonly encountered diagnoses in neuro-rehabilitation b. Prioritize physiotherapy-related problems and develop appropriate intervention strategies c. Implement, modify and progress the physiotherapy plan to ensure the best functional outcome. d. Recognize what is beyond the scope of physiotherapy and instigate referrals to other health care professionals or community resources e. Discuss the key prognostic indicators for specific diagnosis. f. Develop a plan of discharge from physiotherapy and for follow-up care including community re-integration, home management, and barrier modification. g. Select the community services and other resources available for individuals with neurological impairments h. Discuss the role of physiotherapists in primary health care and disease prevention i. Critique the optimal intervention strategies based on the best available research evidence specific to each diagnostic group. <u>Attributes for all-roundedness</u> a. practice effective interpersonal communication (i.e., written, oral, nonverbal) by seeking and providing feedback on professional performance. b. reflect on personal performance in the decision-making process and in the application of technical procedures.
Subject Synopsis/ Indicative Syllabus	1. <u>Principles of holistic management of individuals with neurological impairment</u> • Application of neuroplasticity and neurophysiology to neuro-rehabilitation • Application of motor learning principles to neuro-rehabilitation • Concept of International Classification of Functioning, Disability and Health (ICF) • Role of health care professionals within the 'rehabilitation pathway' i.e. primary, secondary and tertiary care, extended care • Outcome measures, preventive measures, community resources

- Environmental, social & cultural factors and their effects on the overall management.

2. <u>General management of common neurological conditions, with respect to their --</u>

- Definition
- Prevalence/incidence in Hong Kong/elsewhere
- Cause/etiology
- Clinical features/signs & symptoms
- Management of a specific condition (diagnostic tests, operative vs. non-operative management, common medications, complications/ limitations)
- Prognosis; time course; assessment and treatment

* Peripheral nerve lesion

* Spinal cord injury

* Cerebral infection

***** Balance and vestibular dysfunction

***** Ataxia and In-coordination disorders

***** Cognitive and perceptual problems

* Neurodegenerative disease - Parkinson's disease, Alzheimer's disease

* Neuropathy - Guillain-Barre Syndrome, Motor Neurone Disease, Poliomyelitis/ Post-Polio Syndrome

3. <u>Assessment</u>

Examine patients/clients by obtaining a history from them and from other relevant sources:

- General demographic
- Family history
- Social history
- Living environment (home and community, device and equipment)
- Environmental and home barriers
- Employment
- Functional status and activity level (current and premorbid functional status)
- Medical/surgical/neurological history
- Chief complaints
- Medications
- Medical/surgical treatment
- Laboratory and diagnostic tests (neuroimaging, electrophysiology)
- Fall history
- Perform systematic assessment procedures:
- Neuromuscular system
- Sensory integrity and Perception
- Sensory integration
- Motor control, control of voluntary movement

- Muscle length, active and passive range of movement,
- Muscle strength
- Reflex integrity
- Muscle tone
- Hand function, dexterity
- Movement patterns
- Coordination and agility
- Posture
- Balance, gait and locomotion
- Function, ADL, IADL, self-care
- Arousal, consciousness, cognition, attention, recall
- Mental status, cognition
- Integrity of cranial and peripheral nerves
- Orthotic and assistive devices
- Home environment
- Work, community, and leisure re-integration

4. <u>Diagnosis and plan of care</u>

- Interpret and analyse the assessment findings
- Formulate a diagnosis utilizing a hypothesis-driven clinical decision- making process to identify existing impairments, activity limitations, and participation restrictions
- Incorporate additional information from other professionals, as needed, in the diagnostic process
- Determine short- and long-term functional goals
- Address required functions
- Establish a treatment plan that is safe, effective and client-centered
- Prioritize treatment interventions
- Evaluate the effectiveness of treatment interventions
- Utilize reliable and valid outcome measures
- Progress/modify treatment interventions in response to client status
- Admission and discharge planning
- Data collection, analysis and reporting
- Produce accurate documentation
- Engage interdisciplinary teamwork
- Collaborate and communicate effectively among team members
- Refer to other health practitioners if appropriate

5. <u>Treatment interventions</u>

Design and implementation of a physiotherapy treatment plan, based on scientific evidence, which integrates techniques/components from what some consider different ‘approaches’, for example:

	• Motor Control 'systems' • Motor relearning model • Biomechanical principles • Facilitation principles - Bobath/Neurodevelopmental therapy (NDT)/ Proprioceptive neuromuscular facilitation • Constraint-induced therapy • Harness body weight-support for gait training • Movement control, Movement pattern training • Strength and endurance program • Flexibility exercises • Coordination training • Proprioception training • Somatosensory training • Practice of functional tasks • Transfer training • Gait and locomotion training • Balance and fall prevention • Application of Tai Chi in fall management • Gaze stabilization • Posture, postural stabilization • ADL: bathing, bed mobility, transfer, dressing, eating, grooming • Instrumental ADL training: home maintenance • Home exercise program • Functional training in self-care and home management • Environmental modifications • Prescription of assistive/adaptive device, use and training • Barrier accommodation or modifications • Technology Application - Functional electrical stimulation (FES), Biofeedback (EMG, electromyography), Prosthetics & Orthotics: Inhibitory casting, ankle-foot orthosis • Vestibular rehabilitation 6. <u>Patient/client related instruction</u> • Health promotion • Disease prevention i.e. recurrence of stroke • Education, advice and training of patients/clients and carers • Level of communication and instruction
Teaching/Learning Methodology	Lectures will cover medical/neurosurgerical management, neuroplasticity and motor-learning theories in neuro-rehabilitation. In seminars and tutorials sessions, students will discuss clinical reasoning, and appraise evidence-based practice and outcome measures. In practical classes, students will learn assessment and treatment skills and the rationale of selecting these skills. There is also case-based clinical teaching enabling

students to apply their theory and knowledge into clinical practice. Web-based learning allows student to learn the knowledge and enhance their clinical problem ability at their own pace.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed										
		a	b	c	d	e	f	g	h	i	j	k
Written test	45	√	√	√	√	√	√	√	√	√	√	√
Practical test	40	√	√	√	√	√	√			√	√	√
Seminar presentation	15	√	√	√	√	√	√	√	√	√	√	√
Total	**100**											

Written test: Aims to assess students' understanding of theory, pathology, and management of people with neurological dysfunctions

Practical test: Aims to evaluate students' clinical reasoning, selection of evaluation and treatment choice and skills in managing simulated patients with common neurological problems

Seminar presentation: Aims to evaluate students' ability to critically review the best available research evidence to identify the management strategies in the area of neuro-rehabilitation

Student Study Effort Expected

Class contact:	***(58 Hrs.)***
▪ Lecture	8 Hrs.
▪ Tutorial/Seminar	16 Hrs.
▪ Laboratory	32 Hrs.
▪ Clinical Teaching	2 Hrs.
Other student study effort:	***(50 Hrs.)***
▪ Self-study	20 Hrs.
▪ Web-based activities	15 Hrs.
▪ Preparation for written assignment	15 Hrs.
Total student study effort	**108 Hrs.**

Reading List and References

Agency for Health Care Policy and Research (1995). *Post-Stroke Rehabilitation, Clinical Practice Guideline No. 16*. Rockville, MD: US Dept. of Health and Human Services. (http://text.nlm.nih.gov/tempfiles/tempD134085)

Alder SS, Beckers D, Buck M (2000) *PNF in practice: An illustrated Guide*. *2nd ed.* Hong Kong: Springer.

Bossoe Gjelsvik BE (2008) *The Bobath Concept in Adulat Neurology. 1st ed.* New York: Thieme.

	Bromley I (2006). *Tetraplegia and Paraplegia: A Guide for Physiotherapists. 6th ed.* Edinbergh: Churchill Livinstone. Burton & Lazaro & Roller (2012) *Umphred's Neurological Rehabilitation.* 6th ed. Mosby Elsevier. Edward S (2002). *Neurological Physiotherapy - A Problem Solving Approach*. *2nd ed*. Edinburgh: Churchill Livingstone. Raine S, Meadows L, Lynch-Ellerington M (2009) *Bobath Concept: Theory and Clinical Practice in Neurological Rehabilitation*. Iowa: Wley-Blackwell Publishing Co. Shumway-Cook, A. and Woollacott, M. (2007) *Motor Control – Translating Research into Clinical Practice 3rd ed.* Baltimore: Lippincott Williams and Wilkins.

Subject Code	**RS5320**
Subject Title	**PRIMARY HEALTH AND COMMUNITY CARE**
Credit Value	3
Level	5
Pre-requisites	RS5305 Rehabilitation Psychology RS5307 Exercise Science RS5316 Cardiorespiratory Physiotherapy RS5319 Neurological Physiotherapy II RS5312 Musculoskeletal Physiotherapy II RS5322 Professional Ethics and Legal Issues
Objectives	1. To acquaint students with the bio-psychosocial, cultural and environmental attributes of health and disease across the life span 2. To integrate knowledge of holistic health care, including primary to tertiary care, in managing non-communicable diseases, and in preventing and managing health risks for individuals and target populations. 3. To acquire knowledge of health care management, resources and evidence-based interventions in chronic disease management, health promotion and disease prevention in primary health and community settings.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** a. synthesize knowledge of epidemiology of health and non-communicable diseases in the health care burden; b. appraise needs and resources (patients/clients, caregivers, health care providers, educational and community resources) in holistic health care for chronic health problems; c. determine strategies to meet identified goals for optimal bio-psycho-social functioning and quality of life, taking into consideration physical, psychological, cognitive, social and environmental factors, as well as ethics; d. specify the role and activities of physiotherapists in health promotion and primary care of people with chronic health problems; e. select evidence-based intervention and outcome evaluation for specific/ overall health care management in primary health and community settings. f. apply management concepts in organizing health promotion and primary care activities. g. Interact with peers, clinical experts and clients through effective communication, both self-directed and actively, in order to achieve the learning goals.
Subject Synopsis/ Indicative Syllabus	1. Epidemiology of health and chronic illnesses a. *metabolic/environmental/lifestyle* – e.g., cancer, DM, renal disorders, obesity, COPD b. *mental health* – e.g., stress, sleep disorders, depression, schizophrenia, substance abuse c. *neuro-/musculo-skeletal degenerative/auto-immune conditions* – e.g., aging, dementia, chronic pain, arthritis 2. Addressing ICF and quality of life in chronic illness management

	3. Economics and management concepts in primary health care versus secondary and tertiary health care. 4. Health risk assessment and drugs implication 5. Primary, secondary and tertiary prevention of illness 6. Physiotherapy in primary and community health care delivery – strategies of empowerment, evidence based interventions, inter-professional communication, education, integration of primary health and community care resources **7.** Determining outcomes and evaluation in provision of primary and community health care services
Teaching/Learning Methodology	Lectures, interactive tutorials and seminars, self-directed experiential learning, and reading of literature.
Assessment Methods in Alignment with Intended Learning Outcomes	See table below.

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed						
		a	b	c	d	e	f	g
Pamphlet design	20	√	√	√	√	√	√	√
Seminar Presentation	40	√	√	√	√	√	√	√
Written test	40	√	√	√	√	√	√	
Total	**100**							

Pamphlet design will require the student to demonstrate their ability to integrate their physiotherapy knowledge and understanding of the resources in the community to design suitable promotional material. It also facilitates the students to acquire an essential skill required in the primary care setting.

Seminar Presentation will be a group assignment related to student's learning experience in the subject. They will be required to conduct a literature review of related health care topics and translate the latest evidence to health promotion materials (e.g. health talk and promotional videos) that can be understood by their target audience (e.g. older people, patients). Students shall also integrate the most updated knowledge on primary health care in local and/or overseas through consultation with faculty consultants to develop their analytical and critical thinking in self-directed learning and literature review.

Written test aims to evaluate the student's understanding of the primary health care, health promotion, drug implications, and disease prevention covered in the subject.

Student Study Effort Required		
	Class contact:	***(42 Hrs.)***
	▪ Lecture	24 Hrs.
	▪ Tutorial	12 Hrs.
	▪ Field visit	6 Hrs.
	Other student study effort:	***(74 Hrs.)***
	▪ Coursework preparation	48 Hrs.
	▪ Self-study	26 Hrs.
	Total student study effort	**116 Hrs.**
Reading List and References	Cattan M., Tilford S. Mental health promotion: a lifespan approach. Maidenhead; New York: Open University Press, 2006.	

	Greenhaigh T. Primary health care: theory and practice. Malden, Mass: Blackwell Pub. 2007. Sapsford R, Bullock-Saxton J, Markwell S. Women's health: a textbook for physiotherapists. London, Philadelphia: W.B. Saunders, 1998. World Health Organization. The world health report 2008: primary health care now more than ever. Geneva: WHO Press, 2008. Flinders Human Behaviour and Health Research Unit, Flinders University. Capabilities for Supporting Prevention and Chronic Condition Self-Management. Commonwealth of Australia 2009.

Subject Code	**RS5322**
Subject Title	**PROFESSIONAL ETHICS AND LEGAL ISSUES**
Credit Value	**1**
Level	**5**
Pre-requisite / Co-requisite/ Exclusion	Nil
Objectives	By completing this subject, the students will be able to demonstrate an adequate understanding of the ethical principles and legal issues relating to physiotherapy practice, with a special focus in Hong Kong.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. recognize the roles of different organisations in the governance of physiotherapy practice. b. recognize the legal responsibilities in physiotherapy practice and appreciate the significance of self-regulation. c. observe the rules and regulations relating to physiotherapy practice and maintain the highest professional and ethical standard during practice. The rules and regulations include Personal Data (Privacy) Ordinance, Prevention of Bribery Ordinance, Standards of Physiotherapy Practices and Service, Code of Practice and Code of Ethics. d. respect and observe “patients’ rights" and comply with “confidentiality” and “informed consent” during practice. e. translate theoretical and ethical principles into responsible and accountable professional behaviour and conduct.
Subject Synopsis/ Indicative Syllabus	1. Role of professional organizations in the governance of physiotherapy practice: i. Hong Kong Physiotherapy Association (HKPA); ii. World Confederation for Physical Therapy (WCPT); iii. Hong Kong Supplementary Medical Professions Council (SMPC) iv. The Physiotherapists’ Board of Hong Kong 2. Legal and professional responsibilities and rights i. Patient’s Rights & the Patient’s Charter (Hospital Authority) – confidentiality and informed consent. ii. Professional Liability and Malpractice – Standards of Physiotherapy Practices and Service, Code of Ethics, Code of Practice, Supplementary Medical Professions Ordinance - Physiotherapists (Registration and Disciplinary Procedure) Regulations (CAP 359J). iii. Personal Data (Privacy) Ordinance & Prevention of Bribery Ordinance iv. Risk management to reduce professional liabilities – liability insurance and documentation of physiotherapy reports.
Teaching/Learning Methodology	An interactive learning approach is used in this subject, through various teaching and learning methodologies including interactive lectures, tutorials and seminar. With this interactive learning approach, students “read, reflect upon, respond to, and, in general, experience” (Davis, 1998) how to become physiotherapists, practice with an ethical and

legal standard expected by our society and population at large.

Role-play, simulations, and reflection activities, together with case studies analysis provide opportunities for students to interpret the meaning of the Rules & Regulation governing physiotherapy practice and relate ethical principles to professional practice. Discussion during tutorial sessions provides students with opportunities to use English to articulate, analyze and evaluate information and ideas.

A subject-specific website has been developed to allow students' access to teaching and suggested reading material. Assigned reading material provides students with information to the legal requirements of physiotherapy practice. Preparation (pre-reading) prior to tutorials is essential.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)				
		a	b	c	d	e
Quiz	25	√	√	√	√	√
Class Participation	25	√	√	√	√	√
Learning Portfolio	50	√	√	√	√	√
Total	**100**					

A quiz at the end of the semester will be held to assess the students' understanding of the materials covered in the subject.

Interactive activities such as small group discussions and case studies will be conducted in the tutorial sessions. The learning portfolio required the students to write up a reflection based on either bioethics articles or recent reported medico-legal incidents.

Throughout these processes, the students are required to gather information relating to the scenarios and incidents, critically appraise and objectively analyse the scenario with reference to the rules and regulation governing physiotherapy practice. The ability to express their integrated idea verbally and in written format will be reflected in the "class participation" and "learning portfolio" component.

Student Study Effort Expected

Class contact:	***(13 Hrs.)***
▪ Lecture / Seminar / Tutorial	13 Hrs.
Other student study effort:	***(30 Hrs.)***
▪ Self-study	15 Hrs.
▪ Preparation of learning portfolio	15 Hrs.
Total student study effort	**43 Hrs.**

Reading List and References	**Required Text:** Hong Kong Government SAR. (1992). *The Supplementary Medical Professions Ordinance*. Chapter 359. Hong Kong: Hong Kong Government SAR. Hong Kong Government SAR. (1999) *Physiotherapists (Registration and Disciplinary Procedures) Regulation. (CAP.359 sub. Leg. J).* Hong Kong: Hong Kong Government SAR. Hong Kong Physiotherapy Association (Ltd). Publications on *Standards of Professional Practice and Services.* Physiotherapists Board, Hong Kong Government SAR. (1999) *Code of Practice of the Physiotherapists Board of Hong Kong*. Hong Kong: Hong Kong Government SAR. Selected articles and newspaper cuttings. **Recommended Reading:** The Hong Kong Medical Association & The Independent Commission Against Corruption. *Integrity in Practice: A Practical Guide for Medical Practitioners on Corruption Prevention.* Gabard, DL. (2011). *Physical therapy ethics*. 2nd ed. F. A. Davis Co. Philadelphia. ISBN-13: 978-0803623675 Beauchamp TL, Childress JF. (2009). *Principles of biomedical ethics*. 6th ed. Oxford University Press. New York, N.Y. ISBN-13: 978-0195335705 Purtilo R. (2004). *Ethical Dimensions in the Health Professions.* 4th ed. Saunders. ISBN-13: 978-0721602431

Subject Code	**RS5323**
Subject Title	**ADMINISTRATION AND MANAGEMENT**
Credit Value	3
Level	5
Pre-requisite / Co-requisite/ Exclusion	Nil
Objectives	Students learn to be aware of the current healthcare system in Hong Kong and around the world. They need to be aware of the concepts of entrepreneurship and management so as to cope with their future roles as a manager and clinician in a variety of practice settings.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. Identify and understand the impact of sociological, political, economic, and epidemiological factors on the delivery of physiotherapy / occupational therapy in Hong Kong. b. demonstrate an awareness of local and international public health trends that may influence the context of physiotherapy/occupational therapy practices. c. draw upon the concepts of entrepreneurship and management in designing a business plan of a physiotherapy / occupational therapy practice. d. formulate marketing strategies to enhance service (business) opportunities. e. understand and apply the concepts of quality assurance and staff performance criteria to develop effective plans for achieving quality practice/service. f. identify means of promoting and upgrading the service and status of therapy professions. g. relate and discuss the implications of professional ethics and the law on physiotherapy / occupational therapy practices.
Subject Synopsis/ Indicative Syllabus	1. Overview of the current and future Health Care System in Hong Kong and overseas. 2. Introduction to Health Care Management – basic concepts and skills of management and administration. 3. Therapist as a Manager and as a Clinician i. Operational management a. Organizational structure b. Planning on space and equipment c. Basic concepts of financial management ii. Strategic and Business planning and administration a. Concepts of entrepreneurship b. Marketing & health promotion strategies c. Concepts of quality assurance and risk management iii. Human Resource Management

a. Leadership & communication
b. Inter-professional collaboration and team work
c. Change management
d. Staff appraisal, training and development

4. Health Service Legislation and professional development
   i. Supplementary Medical Professions Ordinance
   ii. Professional Registration Board
   iii. Professional associations
   iv. Professional and ethical standards
5. Introduction to different healthcare service delivery models
   i. Public sector
   ii. Private sector
   iii. Community-based rehabilitation services
   iv. Concepts on medical insurance models

Teaching/Learning Methodology

Interactive lectures highlight the concepts of business administration, management and entrepreneurship and in the health care and rehabilitation service. Organizational structure and management models of different healthcare organizations in the public and private sectors will be examined and compared. Experienced managers and therapists will share their managerial and administrative experiences with students in seminar sessions. Students in small groups will work independently, applying administrative and management concepts to formulate business plans for simulated-practice models. Through learning activities such as student-presentations, students learn to appreciate how the organizational structures impact on their daily professional practices and how marketing strategies helps to promote professional services.

Assessment Methods in Alignment with Intended Learning Outcomes

(Note 4)

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						
		a	b	c	d	e	f	g
Business plan (group project)	40		√	√	√	√	√	√
Individual report	40	√	√	√	√	√	√	√
Class work	20	√	√				√	√
Total	**100**							

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

1. Business plan: This group project will allow the students an opportunity to develop their own ideas and apply the concepts that they have learnt in this subject into this business plan. There will be a group presentation and a written report to be submitted.

2. Individual report: Students will be asked to select a topic out of several topics which are current healthcare issues that are relevant for their learning, and they need to find the appropriate literature to support their viewpoints and write a complete essay on the issue.

3. During tutorial sessions, there will be opportunities for students to participate in group discussions, debates and submit short written reports on various topics and this will be evaluated.

Student Study Effort Expected	***Class contact:***	***(39 Hrs.)***
	▪ Lectures	16 Hrs.
	▪ Tutorials	12 Hrs.
	▪ Seminars	6 Hrs.
	▪ Field visit	5 Hrs.
	Other student study effort:	***(66 Hrs.)***
	▪ Group discussion/ work on business plan	34 Hrs.
	▪ Self-reading/literature search/ written assignment	32 Hrs.
	Total student study effort	**105 Hrs.**
Reading List and References	Egan, G. (2007). *The skilled helper: a problem-management and opportunity-development approach to helping*. (8th ed.) Pacific Grove, USA: Thomson/Brooks/Cole. Everett, T. Donaghy M. & Feaver S. (2003). *Interventions for mental health. - an evidence-based approach for physiotherapists and occupational therapists.* Butterworth Heinemann. Frank, R. G., & Elliott, T. R. (Eds.) (2000). *Handbook of rehabilitation psychology*. Washington, DC, USA: American Psychological Association. French, S. & Sim, J. (Eds.) (2004). *Physiotherapy: a psychosocial approach.* Edinburgh. Butterworth Heinemann.	

Subject Code	**RS5324**
Subject Title	**RESEARCH PROJECT**
Credit Value	3
Level	5
Pre-requisite	RS5303 Research Methods and Statistics
Objectives	By completing this subject, the students will be able to demonstrate an initiative, independence, and the ability to solve problems during the pursuit of a defined project.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: ***Professional/academic knowledge and skills*** a. Demonstrate initiative, independence and the ability to solve problems during the pursuit of a defined project. b. Based on information from the scientific literature, justify, design and interpret project work. c. Integrate understanding of the interrelationships between project rationale, project design/methodology and final project outcomes. d. Integrate depth of understanding of the subject content and methodology within their specific project e. Present the results of the project in an appropriate written and oral scientific manner. ***Attributes for all roundedness*** a. Read and summarize information from the professional literature. b. Use English to articulate, analyze and evaluate information and ideas verbally.
Subject Synopsis/ Indicative Syllabus	The content and organization of the project study will depend on the specific project and its objectives. Each student will be expected to spend approximately 135 hours for the project. It is anticipated that each student will monitor their time in at least three areas: independent study, discussion time with supervisor(s), and group-related activities. Organizational meetings will be held to assist students to understand subject expectations and to prepare for final project presentations.
Teaching/Learning Methodology	*Independent study is the primary mode of learning. It is focused on a specific project with identified objectives. Students will form small groups and undertake an independent project under the guidance of a project supervisor. The guidance may take the form of regular meetings, laboratory sessions, tutorials and/or consultations during field visits.* Together with the Research Methods and Statistics course (RS5303), a range of learning

experiences are provided to allow the student to develop beginning-level skill in the process of scientific inquiry. The aim is to *develop 'critical consumers of the professional/scientific literature and to have the ability to collaborate in investigative projects'*. The development of an investigative project allows students to practice skills required in the scientific inquiry process. The final written report on the project is assessed in *Research Project (RS5324).*

The project will represent a component of an on-going project or a new venture (e.g. pilot project). The project consists of three components: i) critical review of the literature review; ii) formulation of research questions and study design; and iii) data collection and analysis. Whichever type, a range of projects may meet the global objectives for the MPT Project. Projects may reflect different areas and approaches, such as:

- experiment-based (e.g., measures of change, reliability);
- service-based (e.g., 'needs' assessment, develop/evaluate exercise or intervention programmes);
- survey-based (e.g., quality of life measures, profile of continuing education);
- observation-based (e.g., interactions between clients and rehabilitation professionals, rehabilitation team interactions);
- interview-based (e.g., client's perception of service/intervention, impact of disability on client's daily living), or
- aids and technology development (e.g., develop/adapt an assistive device/aid).

To further assess the students' planning process and critical thinking, each student is required to submit a portfolio describing the significance of the project, the process of planning the various aspects of the study (e.g., research question, study design, outcome measurements, statistical analysis), and the difficulties encountered.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						
		a	b	c	d	e	f	g
Individual assessment with viva examination	30	√	√	√	√	√	√	√
Portfolio	10	√	√	√	√	√	√	√
Final written report	40	√	√	√	√	√	√	√
Oral presentation	20	√	√	√	√	√	√	√
Total	**100**							

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

<u>Continuous assessment</u>

Individual Assessment (30%) – achieve intended learning outcomes #a-g through continuous assessment with regard to active participation and critical questioning of each student.

Portfolio (10%) – achieve intended learning outcomes #a-g through the submission of a portfolio.

	Written Report (40%) – achieve intended learning outcomes #a-g through completion of written report in the form of a submission for publication to the local PT or OT journal. Presentation (20%)- Achieve intended learning outcomes #a-g through the scientific oral presentation.	
Student Study Effort Expected	**Class contact:**	***(14 Hrs.)***
	▪ Tutorial/Seminar	14 Hrs.
	Other student study effort:	***(120 Hrs.)***
	▪ Independent study + discussion time with supervisor(s) + group-related activities	120 Hrs.
	Total student study effort	**134 Hrs.**
Reading List and References	Cooper, H.M. (1989). Integrating research: a guide for literature reviews. 2nd Edition. Newbury Park: Sage Publications. Day, R.A. (2006). How to Write and Publish a Scientific Paper. 6th Edition. Phoenix, Az: Oryx Press. Domholdt, D. (2005). Rehabilitation research: principles and applications. 3rd Edition. St. Louis, Mo.: Elsevier Saunders. Hicks, C.M. (1995). Research for Physiotherapists: Project Design and Analysis. 2nd Edition. Edinburgh: Churchill Livingstone. Ottenbacher, K.J. (1986). Evaluating Clinical Change: Strategies for Occupational and Physical Therapists. Baltimore: Williams & Wilkins. Portney, L.G. & Watkins, M.P. (2009). Foundations of Clinical Research: Applications to Practice. 3rd Edition. Upper Saddle River, New Jersey: Prentice-Hall Inc.	

Subject Code	**RS5331**
Subject Title	**CLINICAL EDUCATION I**
Credit Value	5
Level	5
Pre-requisite	RS5304 Human Development across Lifespan RS5307 Exercise Science RS5310 Principles of Physiotherapy Practice RS5312 Musculoskeletal Physiotherapy II RS5315 Electrophysical Therapy II RS5316 Cardiorespiratory Physiotherapy RS5319 Neurological Physiotherapy II RS5322 Professional Ethics and Legal Issues
Objectives	To develop skills in assessment and client care management with a focus on the musculoskeletal, cardiorespiratory and/or neurological systems in acute and/or rehabilitation settings of the Hospital Authority, and the ability to apply treatment techniques integrating theory and science into physiotherapy practice.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** <u>Professional/academic knowledge and skills</u> a. Demonstrate a knowledge base and a level of competence in musculoskeletal, cardiorespiratory and/or neurological physiotherapy practice. b. Obtain and analyse the pertinent history including current condition, relevant medical, social and family history from the client's/patient's medical record. c. Undertake a comprehensive examination, assessment and evaluation of the clients/patients by performing system reviews. d. Formulate a prioritised list of clinical problems, diagnosis, prognosis and a comprehensive management plan with measurable objectives and goals through clinical reasoning procedures e. Implement interventions with the best evidence-based physiotherapy practice for holistic care f. Address the required functions of the clients/patients, and suggest appropriate accommodations or modifications to environmental, home and work barriers g. Establish and maintain accurate, clear and current records of relevant information within the legal and ethical framework h. Evaluate the effectiveness of treatment in achieving the planned outcome i. Modify the plan of care as appropriate and plan for admission, discharge and follow-up care j. Engage in self-directed learning to enhance the outcomes of client/patient care k. Collaborate and communicate effectively with clients/patients, family members, health care professionals and other individuals in interdisciplinary team in written, verbal and non-verbal modes

	l. Exhibit professional and caring interpersonal relationships with clients/patients, relatives/caregivers, and other health care professionals m. Refer clients/patients to other health care professionals when appropriate n. Reflect on personal performance through self, peer and/or clinical educator reviews on clinical judgments o. Understand the roles of other health care professionals and the concepts of multi-professional practice in holistic client/patient care, and assure safety and organization of the unit. <u>Attributes for all-roundedness</u> p. Show awareness and ability to develop values and attitudes appropriate to the profession q. Practise effective interpersonal communication (written, oral and nonverbal) with patients, relatives, carers, colleagues and other medical or allied health professionals. r. Develop problem-solving strategies in clinical settings s. Recognise the socio-economical implications of disease and health care.
Subject Synopsis/ Indicative Syllabus	1. Patient/ client care/ management with focus on musculoskeletal, cardiorespiratory and/or neurological system 2. History analysis (current condition, medical/social/family history) through system reviews 3. Use of relevant clinical tests and outcome measures and their recording 4. Identification of clinical problems according to the ICF model 5. Identification of clients' functional needs and bio-psychosocial barriers 6. Determination of client/patient prognosis 7. Formulation of plan of care with measurable goals underpinned by clinical reasoning 8. Identification of evidence-based intervention strategies for patient/client care/management (including appropriate accommodations, assistive technology and environmental modifications) 9. Effective communication and collaboration with clients, family members, health care professionals and other individuals to determine a plan of care 10. Best evidence-based physiotherapy treatments for musculoskeletal, cardiorespiratory and/or neurological conditions 11. Monitoring and adjustment of the plan of care 12. Evaluation of the effectiveness of treatment and/or plan of care 13. Plan for admission, discharge and follow-up care 14. Maintenance of clear and accurate documentation 15. Provision of referral to other healthcare professionals when appropriate 16. Use of clinical judgment and reflection

Teaching/ Learning Methodology

Clinical placement provides the opportunity for students to experience placements in a range of different facilities for acute and rehabilitation management in HA settings. Students will learn to assess, evaluate and treat clients under the supervision of a Clinical Educator (CE) on a daily basis. Students will have case discussions with the CE during tutorials in order to enhance the integration of foundation knowledge acquired at the University into physiotherapy practice.

Self-directed learning encourages students to identify their learning objectives and continue to seek up-to-date information from reference materials. Students may work alone or in a group in the learning activities and must develop a written or verbal presentation under the supervision of a CE.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/ tasks	% weight -ing	Intended subject learning outcomes to be assessed																		
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
Clinical placement (cont -inuous assess -ment)	100	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Self-directed learning	-	√	√	√	√	√	√		√	√	√	√			√		√	√	√	√
Total	**100**																			

Clinical placement: The nature of physiotherapy practice requires a range of complex skills which is more appropriately assessed on a continuous basis. Students are provided with on-going feedback on their performance during clinical placement which enables the students to monitor their own learning process. Continuous assessment also encourages students to have regular and systematic study.

Self-directed learning: Students are required to reflect critically on their clinical experiences through written reports or case presentations. Students are also required to engage in appropriate self-directed learning that allows them to keep abreast of current knowledge.

Student Study Effort Expected

Class contact:	***(210 Hrs.)***
• Clinical placement (210 hours within a specified period)	210 Hrs.
Other student study effort:	***(25 Hrs.)***
• Self-directed learning	25 Hrs.
Total student study effort	**<u>235 Hrs.</u>**

Reading List and References	Students are required to integrate knowledge obtained from all previous subjects. For specific information, policies and procedures for clinical education, please refer to the following documents: 1. Department of Rehabilitation Sciences (current year). *Master in Physiotherapy Programme Clinical Education Handbook*. The Hong Kong Polytechnic University. 2. Clinical Education Information on LEARN@PolyU

Subject Code	**RS5332**
Subject Title	**CLINICAL EDUCATION II**
Credit Value	5
Level	5
Pre-requisite	RS5331 Clinical Education I
Objectives	To develop skills in assessment and client care management with a focus on the musculoskeletal, cardiorespiratory and/or neurological systems in acute and/or rehabilitation settings of the Hospital Authority, and the ability to apply treatment techniques integrating theory and science into physiotherapy practice.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** <u>Professional/academic knowledge and skills</u> a. Demonstrate a knowledge base and a level of competence in musculoskeletal, cardiorespiratory and/or neurological physiotherapy practice. b. Obtain and analyse the pertinent history including current condition, relevant medical, social and family history from the client's/patient's medical record. c. Undertake a comprehensive examination, assessment and evaluation of the clients/patients by performing system reviews. d. Formulate a prioritised list of clinical problems, diagnosis, prognosis and a comprehensive management plan with measurable objectives and goals through clinical reasoning procedures e. Implement interventions with the best evidence-based physiotherapy practice for holistic care f. Address the required functions of the clients/patients, and suggest appropriate accommodations or modifications to environmental, home and work barriers g. Establish and maintain accurate, clear and current records of relevant information within the legal and ethical framework h. Evaluate the effectiveness of treatment in achieving the planned outcome i. Modify the plan of care as appropriate and plan for admission, discharge and follow-up care j. Engage in self-directed learning to enhance the outcomes of client/patient care k. Collaborate and communicate effectively with clients/patients, family members, health care professionals and other individuals in interdisciplinary team in written, verbal and non-verbal modes l. Exhibit professional and caring interpersonal relationships with clients/patients, relatives/caregivers, and other health care professionals m. Refer clients/patients to other health care professionals when appropriate n. Reflect on personal performance through self, peer and/or clinical educator reviews on clinical judgments o. Understand the roles of other health care professionals and the concepts of multi-professional practice in holistic client/patient care, and assure safety and organization of the unit.

	Attributes for all-roundedness p. Show awareness and ability to develop values and attitudes appropriate to the profession q. Practise effective interpersonal communication (written, oral and nonverbal) with patients, relatives, carers, colleagues and other medical or allied health professionals. r. Develop problem-solving strategies in clinical settings s. Recognise the socio-economical implications of disease and health care.
Subject Synopsis/ Indicative Syllabus	1. Patient/ client care/ management with focus on musculoskeletal, cardiorespiratory and/or neurological system 2. History analysis (current condition, medical/social/family history) through system reviews 3. Use of relevant clinical tests and outcome measures and their recording 4. Identification of clinical problems according to the ICF model 5. Identification of clients' functional needs and bio-psychosocial barriers 6. Determination of client/patient prognosis 7. Formulation of plan of care with measurable goals underpinned by clinical reasoning 8. Identification of evidence-based intervention strategies for patient/client care/management (including appropriate accommodations, assistive technology and environmental modifications) 9. Effective communication and collaboration with clients, family members, health care professionals and other individuals to determine a plan of care 10. Best evidence-based physiotherapy treatments for musculoskeletal, cardiorespiratory and/or neurological conditions 11. Monitoring and adjustment of the plan of care 12. Evaluation of the effectiveness of treatment and/or plan of care 13. Plan for admission, discharge and follow-up care 14. Maintenance of clear and accurate documentation 15. Provision of referral to other healthcare professionals when appropriate 16. Use of clinical judgment and reflection

Teaching/ Learning Methodology

Clinical placement provides the opportunity for students to experience placements in a range of different facilities for acute and rehabilitation management in HA settings. Students will learn to assess, evaluate and treat clients under the supervision of a Clinical Educator (CE) on a daily basis. Students will have case discussions with the CE during tutorials in order to enhance the integration of foundation knowledge acquired at the University into physiotherapy practice.

Self-directed learning encourages students to identify their learning objectives and continue to seek up-to-date information from reference materials. Students may work alone or in a group in the learning activities and must develop a written or verbal presentation under the supervision of a CE.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/ tasks	% weight -ing	Intended subject learning outcomes to be assessed																	
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
Clinical placement (cont -inuous assess -ment)	100	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Self-directed learning	-	√	√	√	√	√	√		√	√	√	√			√		√	√	√	√
Total	**100**																			

Clinical placement: The nature of physiotherapy practice requires a range of complex skills which is more appropriately assessed on a continuous basis. Students are provided with on-going feedback on their performance during clinical placement which enables the students to monitor their own learning process. Continuous assessment also encourages students to have regular and systematic study.

Self-directed learning: Students are required to reflect critically on their clinical experiences through written reports or case presentations. Students are also required to engage in appropriate self-directed learning that allows them to keep abreast of current knowledge.

Student Study Effort Expected

Class contact:	***(210 Hrs.)***
▪ Clinical placement (210 hours within a specified period)	210 Hrs.
Other student study effort:	***(25 Hrs.)***
▪ Self-directed learning	25 Hrs.
Total student study effort	**<u>235 Hrs.</u>**

Reading List and References	Students are required to integrate knowledge obtained from all previous subjects. For specific information, policies and procedures for clinical education, please refer to the following documents: 1. Department of Rehabilitation Sciences (current year). *Master in Physiotherapy Programme Clinical Education Handbook*. The Hong Kong Polytechnic University. 2. Clinical Education Information on Blackboard

Subject Code	**RS5333**
Subject Title	**CLINICAL EDUCATION III**
Credit Value	4
Level	5
Pre-requisite	RS5331 Clinical Education I RS5313 Manipulative Physiotherapy RS5317 Pediatric Neurology and Developmental Disabilities RS5320 Primary Health and Community Care
Objectives	This placement is conducted in either hospital-based or **c**ommunity-based rehabilitation setting under Hospital Authority (HA). It aims to develop skills in assessment and integrative holistic physiotherapy management of a variety of conditions (injuries, communicable or non-communicable diseases) across the lifespan.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** <u>Professional/academic knowledge and skills</u> a. Demonstrate a knowledge base and a level of competence in integrative holistic physiotherapy management of the bio-psychosocial effects of injuries and diseases. b. Obtain and analyse the pertinent history including current condition, relevant medical, social and family history from the client's/patient's medical record. c. Undertake a comprehensive examination, assessment and evaluation of the clients/patients by performing system reviews. d. Formulate a prioritised list of clinical problems according to the ICF model, establish diagnosis, prognosis and a comprehensive management plan with measurable objectives and goals through clinical reasoning procedures e. Implement interventions with the best evidence-based physiotherapy practice for holistic care in hospital and community settings f. Address the required functions of the clients/patients, and suggest appropriate accommodations or modifications to environmental, home and work barriers g. Establish and maintain accurate, clear and current records of relevant information within the legal and ethical framework h. Evaluate the effectiveness of treatment in achieving the planned outcome i. Modify the plan of care as appropriate and plan for admission, discharge and follow-up care j. Engage in self-directed learning to enhance the outcomes of client/patient care k. Collaborate and communicate effectively with clients/patients, family members, health care professionals and other individuals in interdisciplinary team in written, verbal and non-verbal modes l. Exhibit professional and caring interpersonal relationships with clients/patients, relatives/caregivers, and other health care professionals m. Refer clients/patients to other health care professionals when appropriate

	n. Reflect on personal performance through self, peer and/or clinical educator reviews on clinical judgments o. Understand the roles of other health care professionals and the concepts of multi-professional practice in holistic client/patient care, and assure safety and organization of the unit. <u>Attributes for all-roundedness</u> p. Show awareness and ability to develop values and attitudes appropriate to the profession q. Practise effective interpersonal communication (written, oral and nonverbal) with patients, relatives, carers, colleagues and other medical or allied health professionals. r. Develop problem-solving strategies in clinical settings s. Recognise the socio-economical implications of diseases and various level of health care.
Subject Synopsis/ Indicative Syllabus	1. Patient/ client care/ management with focus on integrative holistic care for the bio-psychosocial effects of physical injuries, communicable and non-communicable diseases 2. History analysis (current condition, medical/social/family history) through system reviews 3. Use of relevant clinical tests and outcome measures and their recording 4. Identification of clinical problems according to the ICF model 5. Identification of clients' functional needs and bio-psychosocial barriers 6. Determination of client/patient prognosis 7. Formulation of holistic care plan with measurable goals underpinned by clinical reasoning 8. Identification of evidence-based intervention strategies for patient/client care/management (including appropriate accommodations, assistive technology and environmental modifications) 9. Effective communication and collaboration with clients, family members, health care professionals and other individuals to determine a plan of care 10. Best evidence-based physiotherapy treatments for musculoskeletal, cardiorespiratory, neurological and/or multiple system dysfunctions 11. Monitoring and adjustment of the plan of care 12. Evaluation of the effectiveness of treatment and/or plan of care 13. Plan for admission, discharge and follow-up care 14. Maintenance of clear and accurate documentation 15. Provision of referral to other healthcare professionals when appropriate 16. Use of clinical judgment and reflection
Teaching/ Learning Methodology	**Clinical placement** provides the opportunity for students to experience placements in a range of different facilities for primary, secondary and tertiary health care in HA settings. Students will learn to assess, evaluate and treat clients under the supervision of a Clinical Educator (CE) on a daily basis. Students will have case discussions with the CE during tutorials in order to enhance the integration of foundation knowledge

acquired at the University into physiotherapy practice.

Self-directed learning encourages students to identify their learning objectives and continue to seek current knowledge through the use of reference materials. Students will work alone or in a group in the learning activities and to develop a written and verbal presentation under the supervision of the CE.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed																	
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
Clinical placement (continuous assessment)	100	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Self-directed learning	-	√	√	√	√	√	√		√	√	√	√			√		√	√	√	√
Total	**100**																			

Clinical placement: The nature of physiotherapy practice requires a range of complex skills which is more appropriately assessed on a continuous basis. Students are provided with on-going feedback on their performance during clinical placement which enables the students to monitor their own learning process. Continuous assessment also encourages students to have regular and systematic study.

Self-directed learning: Students are required to reflect critically on their clinical experiences through written reports or case presentations. Students are also required to engage in appropriate self-directed learning that allows them to keep abreast of current knowledge.

Student Study Effort Expected

Class contact:	***(175 Hrs.)***
▪ Clinical placement (175 hours within a specified period)	175 Hrs.
Other student study effort:	***(25 Hrs)***
▪ Self-directed learning	25 Hrs.
Total student study effort	**<u>200 Hrs.</u>**

Reading List and References

Students are required to integrate knowledge obtained from all previous subjects.

For specific information, policies and procedures for clinical education, please refer to the following documents:

1. Department of Rehabilitation Sciences (current year). *Master in Physiotherapy Programme Clinical Education Handbook*. The Hong Kong Polytechnic University.
2. Clinical Education Information on Blackboard.

Subject Code	**RS5334**
Subject Title	**CLINICAL EDUCATION IV**
Credit Value	4
Level	5
Pre-requisite	RS5331 Clinical Education I RS5313 Manipulative Physiotherapy RS5317 Paediatric Neurology and Developmental Disabilities RS5320 Primary Health and Community Care
Objectives	This placement is conducted in a health care/rehabilitation setting of HA, preferably with a focus on primary healthcare. It aims to develop skills in assessment and integrative holistic physiotherapy management of a variety of conditions (injuries, communicable or non-communicable diseases) across the lifespan.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** <u>Professional/academic knowledge and skills</u> a. Undertake a comprehensive examination, assessment and evaluation of clients with different conditions and for determination of health risks b. Formulate a diagnosis, prognosis and management plan that is within the scope of physiotherapy practice c. Implement physiotherapy practice by applying clinical reasoning and best evidence-based interventions d. Evaluate the effectiveness of treatment/intervention and adjust the plan of care as appropriate e. Reflect on personal performance through self, peer and/or clinical educator reviews on clinical judgments f. Engage in self-directed learning to enhance the outcomes of client care g. Communicate effectively with clients, family members, health care professionals and other individuals in interdisciplinary team in written, verbal and non-verbal modes h. Demonstrate cultural competence, professional integrity and ethical behaviors in physiotherapy practice <u>Attributes for all-roundedness</u> i. Show awareness and ability to develop values and attitudes appropriate to the profession j. Practise effective interpersonal communication (written, oral and nonverbal) with patients, relatives, carers, colleagues and other medical or allied health professionals. k. Develop problem-solving strategies in clinical and community settings l. Recognise the socio-economical implications of health and illnesses on health care services in the community

Subject Synopsis/ Indicative Syllabus	1. Patient/ client care/ management across lifespan (paediatrics to geriatrics) 2. History analysis (current condition, medical/social/family history) by performing system reviews 3. Use of relevant clinical tests and outcome measures 4. Identification of intervention strategies for patient/client care or management with measureable goals and outcomes 5. Determination of client/patient prognosis 6. Formulation of plan of care underpinned by clinical reasoning 7. Understanding clients' bio-psychosocial barriers and functional needs 8. Effective communication and collaboration with clients, family members, health care professionals and other individuals to determine a plan of care 9. Best evidence-based physiotherapy treatments and integrative intervention strategies 10. Adjustment to and monitoring of the plan of care 11. Evaluation of the effectiveness of treatment and recording of outcomes 12. Plan for admission, discharge and follow-up care 13. Provision of clear and accurate documentation 14. Provision of referral to other healthcare professionals when appropriate 15. Clinical judgment and reflection 16. Interdisciplinary or transdisciplinary teamwork 17. Integration of cultural competence, professional integrity and ethical behaviors into physiotherapy practice with guidance 18. Practice in multiple settings for primary health and community-based rehabilitation 19. Development of community-based rehabilitation, health promotion and education, function training programmes and/or instrumental activities of daily living training in community, school and work settings 20. Facilitation of injury prevention or reduction (injury prevention education and safety awareness) and independent living (ADL training, home management and self-care) 21. Promotion of fitness, wellness and mental health to improve quality of life for clients/patients
Teaching/Learning Methodology	**Clinical placement** provides the opportunity for students to experience placements in a range of different facilities, including public, community and private organizations. Students will learn to assess, evaluate and treat clients, plan and implement health care and rehabilitation programmes under the supervision of a Clinical Educator (CE) on a daily basis. Students will have case discussions with the CE during tutorials in order to enhance the integration of foundation knowledge acquired at the University into physiotherapy practice. **Self-directed learning** encourages students to identify their learning objectives and continue to seek current knowledge through the use of reference materials. Students may work alone or in a group in the learning activities and to develop a written or verbal presentation under the supervision of CE.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/ tasks	% weight -ing	Intended subject learning outcomes to be assessed											
		a	b	c	d	e	f	g	h	i	j	k	l
Clinical placement (continuous assessment)	100	√	√	√	√	√	√	√	√	√	√	√	√
Self-directed learning	-					√	√	√	√				
Total	**100**												

Clinical placement: The nature of physiotherapy practice requires a range of complex skills which is more appropriately assessed on a continuous basis. Students are provided with on-going feedback on their performance during clinical placement which enables the students to monitor their own learning process. Continuous assessment also encourages students to undertake regular and systematic study.

Self-directed learning: Students are required to reflect critically on their clinical experiences through written report or case presentation. Students are also required to engage in appropriate self-directed learning that allows them to keep abreast of current knowledge.

Student Study Effort Expected

Class contact:	***(175 Hrs.)***
▪ Clinical placement (175 hours within a specified period)	175 Hrs.
Other student study effort:	***(25 Hrs.)***
▪ Self-directed learning	25 Hrs.
Total student study effort	**<u>200 Hrs.</u>**

Reading List and References

Students are required to integrate knowledge obtained from all previous subjects.

For specific information, policies and procedures for clinical education, please refer to the following documents:

1. Department of Rehabilitation Sciences (current year). *B.Sc.(Honours) Physiotherapy Programme Clinical Education Handbook*. The Hong Kong Polytechnic University.
2. Clinical Education Information on Blackboard.

Subject Code	**RS5335**
Subject Title	**CLINICAL EDUCATION V**
Credit Value	3
Level	5
Pre-requisite	RS5331 Clinical Education I RS5313 Manipulative Physiotherapy RS5317 Paediatric Neurology and Developmental Disabilities RS5320 Primary Health and Community Care
Objectives	This placement is conducted in either a local primary health or community-based rehabilitation setting of non-HA settings, or in a non-local clinical centre overseas. It aims to develop skills in assessment and integrative holistic physiotherapy management of a variety of conditions (injuries, communicable or non-communicable diseases) across the lifespan.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** <u>Professional/academic knowledge and skills</u> a. Undertake a comprehensive examination, assessment and evaluation of clients with different conditions and for determination of health risks b. Formulate a diagnosis, prognosis and management plan that is within the scope of physiotherapy practice c. Implement physiotherapy practice by applying clinical reasoning and best evidence-based interventions d. Evaluate the effectiveness of treatment/intervention and adjust the plan of care as appropriate e. Reflect on personal performance through self, peer and/or clinical educator reviews on clinical judgments f. Engage in self-directed learning to enhance the outcomes of client care g. Communicate effectively with clients, family members, health care professionals and other individuals in interdisciplinary team in written, verbal and non-verbal modes h. Demonstrate cultural competence, professional integrity and ethical behaviors in physiotherapy practice <u>Attributes for all-roundedness</u> i. Show awareness and ability to develop values and attitudes appropriate to the profession j. Practise effective interpersonal communication (written, oral and nonverbal) with patients, relatives, carers, colleagues and other medical or allied health professionals. k. Develop problem-solving strategies in clinical and community settings l. Recognise the socio-economical implications of health and illnesses on health care services in the community

Subject Synopsis/ Indicative Syllabus	1. Patient/ client care/ management across lifespan (paediatrics to geriatrics) 2. History analysis (current condition, medical/social/family history) by performing system reviews 3. Use of relevant clinical tests and outcome measures in determining health risks, and in evaluating body dysfunctions according to the ICF model 4. Identification of intervention strategies for patient/client care/management with measureable goals and outcomes 5. Determination of clients'/patients' prognosis 6. Formulation of plan of care underpinned by clinical reasoning 7. Understanding clients' bio-psychosocial barriers and functional needs 8. Effective communication and collaboration with clients, family members, health care professionals and other individuals to determine a plan of care 9. Best evidence-based physiotherapy treatments and integrative intervention strategies 10. Adjustment to and monitoring of the plan of care 11. Evaluation of the effectiveness of interventions and recording of outcomes 12. Plan for discharge and follow-up care 13. Provision of clear and accurate documentation 14. Provision of referral to other healthcare professionals when appropriate 15. Clinical judgment and reflection 16. Interdisciplinary or transdisciplinary teamwork 17. Integration of cultural competence, professional integrity and ethical behaviors into physiotherapy practice with guidance 18. Practice in multiple settings for primary health and community-based rehabilitation 19. Development of community-based rehabilitation, health promotion and education, function training programmes and/or instrumental activities of daily living training in community, school and work settings 20. Facilitation of injury prevention or reduction (injury prevention education and safety awareness) and independent living (ADL training, home management and self-care) 21. Promotion of fitness, wellness and mental health to improve quality of life for clients/patients
Teaching/Learning Methodology	**Clinical placement** provides the opportunity for students to experience placements in a range of different facilities, including public, community and private organizations. Students will learn to assess, evaluate and treat clients, plan and implement primary health care programmes under the supervision of a Clinical Educator (CE) on a daily basis. Students will have case discussions with the CE during tutorials in order to enhance the integration of foundation knowledge acquired at the University into physiotherapy practice. **Self-directed learning** encourages students to identify their learning objectives and continue to seek current knowledge through the use of reference materials. Students may work alone or in a group in the learning activities and to develop a written or verbal presentation under the supervision of CE.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/ tasks	% weighting	Intended subject learning outcomes to be assessed											
		a	b	c	d	e	f	g	h	i	j	k	l
Clinical placement (continuous assessment)	100	√	√	√	√	√	√	√	√	√	√	√	√
Self-directed learning	-					√	√	√	√				
Total	**100**												

Clinical placement: The nature of physiotherapy practice requires a range of complex skills which is more appropriately assessed on a continuous basis. Students are provided with on-going feedback on their performance during clinical placement which enables the students to monitor their own learning process. Continuous assessment also encourages students to undertake regular and systematic study.

Self-directed learning: Students are required to reflect critically on their clinical experiences through written reports or case presentations. Students are also required to engage in appropriate self-directed learning that allows them to keep abreast of current knowledge.

Student Study Effort Expected

Class contact:	***(140 Hrs.)***
▪ Clinical placement (140 hours within a specified period)	140 Hrs.
Other student study effort:	***(25 Hrs.)***
▪ Self-directed learning	25 Hrs.
Total student study effort	**<u>165 Hrs.</u>**

Reading List and References

Students are required to integrate knowledge obtained from all previous subjects.

For specific information, policies and procedures for clinical education, please refer to the following documents:

1. Department of Rehabilitation Sciences (current year). *Master in Physiotherapy Programme Clinical Education Handbook*. The Hong Kong Polytechnic University.
2. Clinical Education Information on Blackboard.

Subject Code	**RS5336**
Subject Title	**CLINICAL EDUCATION VI**
Credit Value	3
Level	5
Pre-requisite	RS5331 Clinical Education I RS5313 Manipulative Physiotherapy RS5317 Paediatric Neurology and Developmental Disabilities RS5320 Primary Health and Community Care
Objectives	This placement is conducted in either a local primary health or **c**ommunity-based rehabilitation setting of non-HA settings, or in a non-local clinical centre overseas. It aims to develop skills in assessment and integrative holistic physiotherapy management of a variety of conditions (injuries, communicable or non-communicable diseases) across the lifespan.
Intended Learning Outcomes	***Upon completion of the subject, students will be able to:*** <u>Professional/academic knowledge and skills</u> a. Undertake a comprehensive examination, assessment and evaluation of clients with different conditions and for determination of health risks b. Formulate a diagnosis, prognosis and management plan that is within the scope of physiotherapy practice c. Implement physiotherapy practice by applying clinical reasoning and best evidence-based interventions d. Evaluate the effectiveness of treatment/intervention and adjust the plan of care as appropriate e. Reflect on personal performance through self, peer and/or clinical educator reviews on clinical judgments f. Engage in self-directed learning to enhance the outcomes of client care g. Communicate effectively with clients, family members, health care professionals and other individuals in interdisciplinary team in written, verbal and non-verbal modes h. Demonstrate cultural competence, professional integrity and ethical behaviors in physiotherapy practice <u>Attributes for all-roundedness</u> i. Show awareness and ability to develop values and attitudes appropriate to the profession j. Practise effective interpersonal communication (written, oral and nonverbal) with patients, relatives, carers, colleagues and other medical or allied health professionals k. Develop problem-solving strategies in clinical and community settings l. Recognise the socio-economical implications of health and illnesses on health care services in the community

Subject Synopsis/ Indicative Syllabus	1. Patient/ client care/ management across lifespan (paediatrics to geriatrics) 2. History analysis (current condition, medical/social/family history) by performing system reviews 3. Use of relevant clinical tests and outcome measures in determining health risks, and in evaluating body dysfunctions according to the ICF model 4. Identification of intervention strategies for patient/client care/management with measureable goals and outcomes 5. Determination of client/patient prognosis 6. Formulation of plan of care underpinned by clinical reasoning 7. Understanding clients' bio-psychosocial barriers and functional needs 8. Effective communication and collaboration with clients, family members, health care professionals and other individuals to determine a plan of care 9. Best evidence-based physiotherapy treatments and integrative intervention strategies 10. Adjustment to and monitoring of the plan of care 11. Evaluation of the effectiveness of treatment and recording of outcomes 12. Plan for discharge and follow-up care 13. Provision of clear and accurate documentation 14. Provision of referral to other healthcare professionals when appropriate 15. Clinical judgment and reflection 16. Interdisciplinary or transdisciplinary teamwork 17. Integration of cultural competence, professional integrity and ethical behaviors into physiotherapy practice with guidance 18. Practice in multiple settings for primary health and community-based rehabilitation 19. Development of community-based rehabilitation, health promotion and education, function training programmes and/or instrumental activities of daily living training in community, school and work settings 20. Facilitation of injury prevention or reduction, safety awareness and independent living (ADL training, home management and self-care) 21. Promotion of fitness, wellness and mental health to improve quality of life for clients/patients
Teaching/ Learning Methodology	**Clinical placement** provides the opportunity for students to experience placements in a range of different facilities, including public, community and private organizations. Students will learn to assess, evaluate and treat clients, plan and implement primary health programmes under the supervision of a Clinical Educator (CE) on a daily basis. Students will have case discussions with the CE during tutorials in order to enhance the integration of foundation knowledge acquired at the University into physiotherapy practice. **Self-directed learning** encourages students to identify their learning objectives and continue to seek current knowledge through the use of reference materials. Students may work alone or in a group in the learning activities and to develop a written or verbal presentation under the supervision of CE.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/ tasks	% weight -ing	Intended subject learning outcomes to be assessed											
		a	b	c	d	e	f	g	h	i	j	k	l
Clinical placement (continuous assessment)	100	√	√	√	√	√	√	√	√	√	√	√	√
Self-directed learning	-					√	√	√	√				
Total	**100**												

Clinical placement: The nature of physiotherapy practice requires a range of complex skills which is more appropriately assessed on a continuous basis. Students are provided with on-going feedback on their performance during clinical placement which enables the students to monitor their own learning process. Continuous assessment also encourages students to undertake regular and systematic study.

Self-directed learning: Students are required to reflect critically on their clinical experiences through written report or case presentation. Students are also required to engage in appropriate self-directed learning that allows them to keep abreast of current knowledge.

Student Study Effort Expected

Class contact:	***(140 Hrs.)***
▪ Clinical placement (140 hours within a specified period)	140 Hrs.
Other student study effort:	***(25 Hrs.)***
▪ Self-directed learning	25 Hrs.
Total student study effort	**<u>165 Hrs.</u>**

Reading List and References

Students are required to integrate knowledge obtained from all previous subjects.

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