

MRGO6306 Robotic Rehabilitation Therapy 機器人康復治療 (2 credit units)

2022/23

Module Head: (to be confirmed)

Session	1	2	3	4	5	6	7	8	Exam
Date	12/5/23 (F)	19/5/23 (F)	31/5/23 (W)	2/6/23 (F)	7/6/23 (W)	9/6/23 (F)	10/6/23 (S) AM	10/6/23 (S) PM	17/6/23 (S)
Time	1830-2130	1830-2130	1830-2130	1830-2130	1830-2130	1830-2130	1000-1300	1400-1700	
Venue	OLC	ZOOM	OLC	CUHKMC	OLC/ZOOM	OLC	CUHKMC	CUHKMC	

Contents

Mini-module	Topic	Speaker	Session	Time slot
Indications in Robotic Rehabilitation	Spinal Cord Injury, Acquired Brain Injury, Stroke, Multiple Sclerosis – 1. Upper extremity rehabilitation 2. Locomotor training 3. Applications of Exoskeleton vs Wheelchair		1	3 hours
Neuroplasticity principles	1. Principles of Neuroplasticity 2. Principles of Gait 3. Locomotor Training 4. Traditional Physiotherapist Practice in Neuroplasticity Rehabilitation		2	3 hours
Introduction of Robotics technology	Introduction to Robotics for Rehabilitation – End effector based robotic rehabilitation Introduction to Robotics for Rehabilitation – Exoskeleton based robotic rehabilitation Researches and Cases	Michael Glover (On-site)	3	3 hours
Applications in Robotic Rehabilitation	EksoNR exoskeleton clinical application, EksoNR application and skills lab	Michael Glover / Janette Tartabini (On-site)	4	3 hours
	Clinical applications of exoskeleton robots for people with spinal cord injuries and Novel devices (electric prosthetic hands and standing wheelchairs)		5	3 hours
	Robotic Rehabilitation in Stroke		6	3 hours
Practicum	Robotic rehabilitation for Real Patient Cases (1)	CUHKMC – Benjamin Lau	7	3 hours
	Robotic rehabilitation for Real Patient Cases (2)		8	3 hours

Brief Description:

Introduction of Robotic Rehabilitation for Neuroplasticity Rehabilitation and therapeutic application of exoskeleton for rehabilitation

介紹以機器人康復治療的神經可塑性康復，及外骨骼在康復中的治療應用。

Learning Outcome:

Students will understand the followings:

1. Principles Neuroplasticity and Rehabilitation;
2. Principles of Robotic Rehabilitation and its application;
3. Updated with the Latest information of Robotic Rehabilitation Technology

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