

Prosthetics and Assistive Technology

Department of Physical Therapy
College of Medicine
National Cheng Kung University
Fall, 2022

TIME & LOCATION: Monday 1:10 – 4 pm, PT Laboratory

Coordinator:

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Office: RM 213

Office Hour: by appointment

Credit: 1 credit for lecture and 1 credit for laboratory/practice

Objective:

This course is designed to introduce basic principles, applications, and concerns of the prosthetics and assistive devices when ambulating or during other activities. Current concept about assistive technology will also be delivered in this course. After this course, students should be able to clinically evaluate and manage the patients with the needs of prosthetics and assistive devices.

Prerequisites:

Functional anatomy, Kinesiology, and Gait analysis

Course structure/Evaluation:

- Lecture notes/information are posted in Moodle system.
- Attendance of lectures and laboratories are required (10%)
- **Mid-term report (45%):** find a patient who is prescribed with a prosthetics or orthotics, and do the evaluation and rehabilitation program for this case. Please also comment on whether the current prosthesis is appropriate for him. Limited to 10 pages. Written in Chinese or English.
- **Final report (45%)**

Week	Date	Topic	Instructor
1	9/05	Introduction of Prosthetics & Assistive Technology Material Properties	林呈鳳
2	09/12	Lower Extremity Prostheses: Prosthesis for BK Amputation (I)	林呈鳳
3	09/19	Lower Extremity Prostheses: Prosthesis for BK Amputation (II)	林呈鳳
4	09/26	Lower Extremity Prostheses: Prosthesis for AK Amputation Case discussion	林呈鳳
5	10/03	Spinal Orthoses/3D Printing Application	林呈鳳
6	10/10	Holiday/ No class	林呈鳳
7	10/17	Upper Extremity Prostheses & Orthoses & UE Splint making (OT 教室)	郭立杰
8	10/24	Lower Extremity Alignment Check & Prosthetic Gait Analysis	林呈鳳
9	10/31	Lower Extremity Orthoses & Foot Orthoses& insole making	林呈鳳
10	11/07	Physical Therapy for Amputee	林呈鳳
11	11/14	Introduction and Framework of Assistive Technologies	顏秀珍
12	11/21	Technologies That Enable Mobility Seating and Positioning Technology	林呈鳳 李韋徵
13	11/28	Visiting Wheelchair Company/Factory 康揚輪椅工廠 (嘉義) (13:00-16:20)	林呈鳳
14	12/05	Visiting Prosthetic Company/Factory 永純義肢永康廠 (13:00-15:30)	林呈鳳
15	12/12	Service Delivery System in Taiwan/ 台南市輔具資源中心:見習與評估 (14:00-15:30)	林呈鳳
16	12/19	Technologies That Enable Computer Access	顏秀珍
17	12/26	Design a Barrier-free Home Environment Exoskeleton Assistive Technology in Rehabilitation	林呈鳳 陳家緯
18	01/02	Holiday/ No class	林呈鳳

REFERENCES:

1. 吳英黛主編 中華民國物理治療學會出版，「輔具評估專業技術手冊」，金名圖書發行
2. Prosthetics & orthotics / Donald G. Shurr, Thomas M. Cook, Norwalk, Conn.: Appleton & Lange, 2002 (2nd).
3. Prosthetics & Orthotics in Rehabilitation. Lusardi MM, Nielsen GC, Butterworth-Heinemann, 2007.
4. Prosthetics and patient management: a comprehensive clinical approach / [edited by] Kevin Carroll, Joan E. Edelstein. Thorofare, NJ : SLACK Inc., c2006