

POR4ULO Subject Introduction
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 National Centre for Prosthetics and Orthotics
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Based on a lecture developed by Kerry Fisher

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Expectations

Lecture: Tuesday's 10am-11am

- Expectation of 2hrs individual work for each hour of delivery
- These are introductions, highlights and summaries you will need to do self directed work on information made available to you to prepare for the final exam.

Tutorial/Workshop: Thursday 9am-12pm or 1pm-4pm

- 2 groups A and B
- Attendance compulsory
- Week 3 group A all day Thursday, group B all day Friday

Assessment

Three Enquiries

- Enquiry One – Hand Project (20%)
 - Enquiry Two – WHO Project (50%)
 - Enquiry Three - Written Exam (end semester) (30%)
- Refer to Subject Learning Guide 2014

Assessment Enquiry 1 (20%)

Low Temperature Orthosis

- Fabrication, fitting and justification (150 words) of a selection of two (2) low temperature thermoplastic (LTT) orthoses for the hand / digits (each device and outline = 10% of total mark)
- Class sessions will show fabrication and use of 4-6 orthoses for the hand, students will make up to 6 individual orthoses (depends on individual efficiency) and select their best two (2) for submission
- For each orthosis selected an explanation of the use of the device is needed – each explanation must be no longer than 150 words and must outline a common application and the biomechanics / function / application of the device and include references.

Assessment Enquiry 2 (50%)

Development of a Case study, research, design and manufacture of an orthoses

- Assessment Components (see timetable for individual submission)
 - Written clinical evidence 1500 words (40%)
 - » Marked on the Level 4 writing Matrix
 - Lower temperature device 60%
 - » Functional Aims and Goals 10%
 - » Fabrication and technical skills 10%
 - » Fitting and evaluation 10%
 - » Outcome measure 5%
 - » Clinical understanding 10%
 - » Professional Communication 5%
 - » Presentation 10%

Assessment Enquiry 3 (30%)

Written Exam (end semester) = 30%

- Short answer and extended response questions based on materials delivered during lecture series or Moodle links, etc.
 - 1 hr duration – 60 minutes = 60 marks
 - Short answer – up to 6 marks per question
 - Extended response – up to 10 marks per question in multiple segments
 - All questions based on lectures and associated information as outlined over the semester

References and recommended reading

- **Joint Motion and Function Assessment
 - Clarkson, HM (2005)
 - **Basic Biomechanics of the Musculoskeletal System
 - Nordin, M and Frankel, VH (1989)
 - *Critical Pathways in Therapeutic Intervention – Upper Extremities
 - Saidoff, DC and McDonough, AL (1997)
- Additional readings and a reference list will be provided in Subject Learning Guide

Staff Contact Details

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General Knowledge

Assumed knowledge (ULO & ULP)

- Anatomy – structure and function of the upper limbs
 - Overview provided in document on moodle
- Biomechanics – kinetics and kinematics of the upper limb
 - References and links provided in document on moodle
- Clinical Assessment – TOTARPS for clinical assessment of the upper limb and any deficits
 - From CAT 2011 and summary in document on moodle
- Fracture healing (ULO)
 - From SLF 2011

Learning Objectives

Key learning outcome 1 (General clinical skills)

- Select an orthotic design, and justify this selection, for a range of pathologies affecting the upper limb commonly treated in orthotic practice

Learning Objectives

Key learning outcome 2 (Clinical assessment)

- Conduct a safe clinical assessment and analyse findings from subjective and objective evaluations to determine clinical outcomes possible for a person with an upper limb pathology

Learning Objectives

Key learning outcome 3 (Prescription)

- Prescribe an orthosis to meet the treatment objectives for a given upper limb pathology and in doing so, articulate a strong and well evidenced rationale to justify the orthotic prescription

Learning Objectives

Key learning outcome 4 (Design of an orthosis)

- Plan treatment incorporating a given orthosis for a person with an upper limb pathology

Learning Objectives

Key learning outcome 5 (Professional communication skills)

- Communicate to an audience of peers a justification for use of an orthosis to manage a common pathology affecting the upper limb for a given client

Upper Limb Orthotics

Overview of common injuries and pathologies that affect upper limb function and / or range of movement

- Concepts of upper limb function
 - Shoulder
 - Elbow
 - Wrist
 - Hand and digits
- Complete upper limb involvement

Upper Limb Orthotics

Overview of common orthoses used in short and long term management of conditions of the upper limb

- Designs
- Custom made
- Prefabricated
- Materials
 - Low temperature thermoplastics
 - High temperature thermoplastics

Upper Limb Orthotics

Overview of the application of orthoses for upper limb rehabilitation / therapy intervention

- Goals of intervention
- Adjunct therapies in rehabilitation and therapy
- Outcome measures

Causes of deficit in the upper limb

Pathological

- E.g., Rheumatoid arthritis

Trauma related

- E.g., Fractures / dislocations
 - Occupational risks

Occupational Risks

Work related hand and wrist injuries in Australia

- (Commonwealth of Australia July 2008)
- Link provided on LMS

Account for ~8,400 hospital admissions per year

Most common work related injuries (32%)

- Mild to severe (e.g., requiring amputation)

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Other Risks

Bites – over 50% of injuries related to human bites are to the hands / wrists and arms!

- MJA, Volume 186 Number 1, January 1 2007

Sports

Accidents

- Vehicle – MVA, MBA
- Falls
- Others????

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Other Risks

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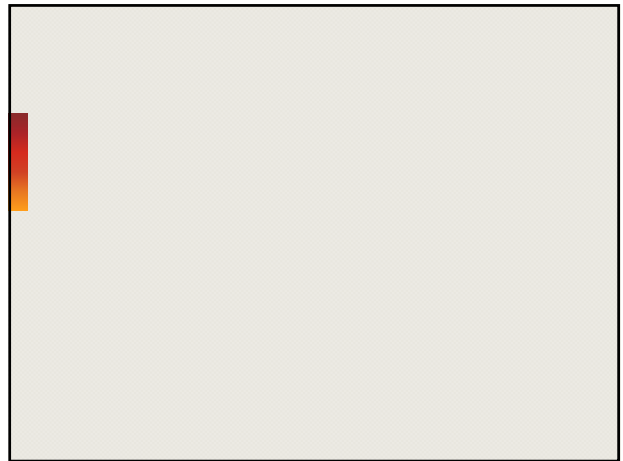


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Thank you

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