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Basic

Lower Limb Orthotics

Specialized Course

in

Orthotics and Prosthetics

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1. Overview

This specialized course in Basic Lower Limb Orthotics is addressed to prosthetics and orthotics professionals on-the-job interested in specific techniques to address foot and ankle-foot pathologies. The main focus of this course is the treatment of drop foot, pes planus, club foot, hidden pes equinus, calcaneus varus and other pathologies related to the foot, sub-talar and ankle joint.

The course consists of 3 parts.

1. Five weeks of online theoretical content
2. Six days on-site training
3. Three months online follow up, including Practical Case presentations

For the online training, the participants will be enrolled in the Human Study virtual classroom/internet platform to receive the specific theoretical content.

The subjects are:

- **Anatomy and Physiology:** including bones, muscles and joints (below knee)
- **Pathology and Prescription:** including understanding different foot disease and how to treat, flat foot, club foot, hidden pes equinus, calcaneus valgus
- **Biomechanics:** including movement of the foot, subltalar and ankle joint during the gait; Showing movie Patient with and without orthosis
- **Professional practice:** Practical techniques for assessment, casting, rectification and prosthetic assembly, fitting, and troubleshooting

The on-site training lasts for six days. It takes place at the local facilities where the participants have to produce one custom made foot orthosis, one custom made ankle foot orthoses (ground reaction) and one custom made jointed AFO according to the trainer's indications.

In the online follow-up period, each student presents up to three, but at least one clinical case presentation based on the learned technique. This presentation is discussed online with the trainer and fellow students in the class.

The maximum number of the on-site training participants depends on the number of trainers.

- Maximum 10 participants for 2 trainers
- Maximum 6 participants for 1 trainer

The course timeline overview is available in Annex 1.

2. Online theory period

Each student acquires credentials to be enrolled in the Human Study platform to participate in the online activities. This period lasts for six weeks and covers weekly theoretical content, video material and weekly live meetings via meeting platform (Webex) for live lectures and discussions. Each lecture is recorded so students are able to access them again throughout the course. Each student has access to the platform tools such as forums, direct messaging and the glossary.

The online period allows each participant to organize their own studying time according to the personal and professional needs.

The online period is organized as follows:

1st week:

- Kick Off conference via Webex
- IT training
- L1 Anatomy
- L2 Anatomy
- Quiz
- Online live session with lecturer (via Webex)

2nd Week

- L3 Biomechanics
- L4 Muscle work
- Quiz
- Online live session with lecturer (via Webex)

3rd Week

- L5 Pathology
- L6 Assessment
- Quiz
- Online live session with lecturer (via Webex)

4th Week

- L7 Gait biomechanics I
- L8 Gait biomechanics II
- Quiz
- Online live session with lecturer (via Webex)

5th week

- L9 Cerebral palsy & Spasticity
- L10 Treatment goals
- Quiz
- Online live session with lecturer (via Webex)

3. On-site training

Basic Lower Limb Orthotics workshop:

The goal of the practical workshop for each student is to manufacture one custom made foot orthosis, one custom made ankle foot orthoses (ground reaction) and one custom made jointed AFO according to the trainer's indications.

The trainer performs each working step and the participants reproduce it. Students perform the entire fabrication process, from the patient anamnesis up to the test fitting and gait analysis with a thermoplastic test socket.

The workshop is organized as follows:

- Day 1 - includes theory revision, patient anamnesis and casting of FO and AFO
- Day 2 - reflection of the examination results and an orthotic treatment planning of the individual patients; participants take plaster casts using gypsum aids and therapy goals
- Day 3 - gypsum models for the AFO's; different correction concepts for foot deformities and modelling techniques
- Day 4 - AFO - gypsum positives for the 3-dimensional orthoses. Rational modelling techniques and critical dimensions
- Day 5 - AFO 's are tested on the patient and several gait observations with changed parameters
- Day 6 - production day (according to group size), foot braces tried on; subjected to static and dynamic gait monitoring; closing of the workshop

The detailed procedure is described in the Agenda (Annex 2).

4. Online follow-up period

This period lasts for 3 month and participants can use this time to contact the trainer to clarify any questions or doubts. In addition, each student is invited to prepare and to present up to three, but at least one, clinical case presentation according to the new learned techniques.

These case presentations are delivered in Power Point format where the participant is required to present his/her treatment. This takes place in a live session (via WebEx), where discussions are held with the trainer and the rest of participants. The aim is to analyze the procedures and results, acquiring a valuable feedback from the group with the trainer as moderator.

The presentation of at least one Case Presentation is mandatory in order to receive the Human Study course certificate.

5. Student requirements

This course is aimed for P&O professionals on-the-job who demand to improve their skills by learning the Lower Limb Orthotics.

Training candidate requirements:

- At least 1-year of practical experience in the field of Prosthetics & Orthotics
- Curriculum Vitae with photo
- Computer with internet access
- Good English level: professional working proficiency

6. Award of Certification

Each participant is required to complete a theoretical examination (online based) and to present at least one case presentation in the frame of the course. Upon successful theoretical examination and completed case presentation, the participant will be awarded a **Certificate of Achievement** by Human Study e.V. Those participants who do not pass theoretical examination and present at least one case presentation, but only attend the workshop, will get Certificate of Attendance.

7. Annex 1 - Course timeline

This excel document is a timeline overview of all the activities during the course. The dates are to be determined upon mutual agreement.

8. Annex 2 - Agenda

The document provides details of the workshop activities. In addition, the document contains needed patients' characteristics and when they need to be present.

9. Annex 3 - Components and materials

This excel document is a calculator for the needed materials of the Basic Lower Limb Orthotics workshop.

10. Annex 4 - Basic tools and Machinery

The document contains a short list of tools that are necessary to be available during the workshop. These are needed personal and workshop tools.

CONTACT

For any enquiries contact us via email on:



scope@human-study.org

Human Study e.V.
Rieterstrasse 29
90419 Nürnberg, Germany

info@human-study.org
www.human-study.org