

**Orthosis**

An external device to control or enhance movement to prevent movement or reduce deformity.

Examples: splint, arch support, spine

**Prosthesis**

An artificial replacement of a body part. It may be internal or external

Examples: artificial hip joint or leg

**Categories of O&P**

|              | Fabrication | Direct Patient Care | Research and Development |
|--------------|-------------|---------------------|--------------------------|
| Category I   | III         | II                  | I                        |
| Category II  | III         | II                  |                          |
| Category III | III         |                     |                          |

**Our Customers**

Centro Don Bosco

-Technical High school

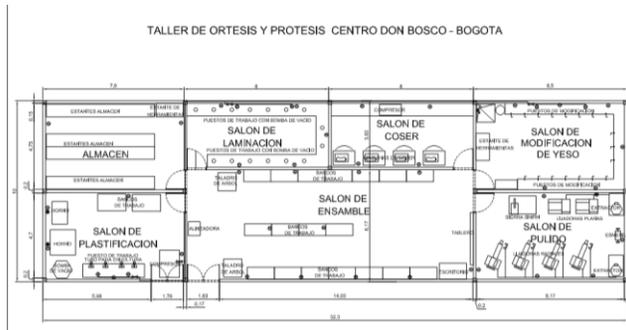
SENA (Servicio Nacional de Aprendizaje)\*

-National training service

Military University\*

-Associated with the Central Military Hospital

Bogotá, Colombia is the only city in the world with training for all three ISPO categories



\*Will begin matriculation in the next two years

**I PRO 309:**



**Prosthetics and Orthotics Education in Latin Americas**



“Education is the most powerful weapon which you can use to change the world” ~ Nelson Mandela

**Our Purpose**

Access to health care is a universal problem. In Latin America, the availability of orthotic and prosthetic, or O&P, treatment is limited simply because of a lack of trained practitioners. I PRO 309 aims to help facilitate the educational programs in Latin America, specifically Bogotá, Colombia. This semester, the focus revolved around creating educational material to supplement the cross-disciplinary capstone course created in the previous semester.



**Special Thanks to**

**Dr. Kevin Meade**



at BioConcepts, Inc.

**Bryan Malas**



From Children’s Memorial and Zachary Albright

**Advisor Dr. Kevin Meade**

**Patient Well-being**

Alex Luttinen, Esther Romo-Ortiz, Julia Kuzel, Pablo Huang Zhang

**Material Compatabiliy**

Mark Ende, Saad Sarvana, Sevi Kocagoz

**Methods of Medical Record Keeping**

Bozhidara Svirnova, Kaleyhia Flowers, William Syvongsa

## What we did:

Created course materials consisting of PowerPoints, outlines and activities for seminars to be integrated into the capstone course created by the previous semester

## Medical Record Keeping

### Goals-

Familiarize all three categories of students with the importance of keeping precise and accurate medical records in the field of O&P.

Introduce students to various methods of medical record keeping to be used by all three categories of O&P students.



★★★★★★★★★★



**Accomplishments-** 5 mini lectures were developed covering what medical records are, what they should entail, and who has the rights to access them. Also included in the mini lectures are the keeping of electronic medical records with databases, QR codes and specialized software. Finally, privacy issues and ethics are discussed to bring the lectures to an end.

### Basic Elements of an O&P Consultation Report

- 1. Review of Primary Diagnosis**  
Statement of Medical Need for O&P Care
- 2. Review of Current Medical History**  
Overview of Current Medical Condition
- 3. Review of Past Medical History**  
Overview of Past Medical Condition
- 4. Review of Current and Past O&P History**  
Overview of Current and Past O&P Services
- 5. Physical Examination**  
Clinical Review of the Specific Medical Condition
- 6. Findings**  
Specific Suggestions for O&P Care and Treatment
- 7. Impressions**  
Theories Regarding Outcomes and O&P Treatment
- 8. Conclusions**  
Theories Regarding Medical Condition and O&P Treatment
- 9. Recommendations**  
Specific Suggestions for O&P Care and Treatment

## Materials

### Goals-

Provide all three categories with an overview of the importance of materials in O&P devices.

Introduce students to the concept of biofidelity and the importance of friction.

Provide a brief explanation of why certain components are made of plastics and other metal.

★★★★★★★★★★

**Accomplishments-** 5 mini lectures giving an overview of plastics and metals using hands on demonstrations of varying strengths for specific materials and case studies focusing on the effects of friction.



## Patient Well-Being

### Goals-

Familiarize all three categories with the psychosocial considerations particular to O&P use.

Introduce students to the 8 stages of adjustment and particular considerations for each age group as well as emphasizing the importance of care involving family.

★★★★★★★★★★

**Accomplishments-** 5 mini lectures covering the how the 8 stages of adjustment present themselves in three age groups, pediatrics, adults and geriatrics while highlighting family involvement in care. The seminar used informational PowerPoints and activities to stress team work between categories and the importance of communication.

★★★★★★★★★★

### 8 Stages of Adjustment

1. Shock
2. Anxiety
3. Denial
4. Depression
5. Internalized Anger
6. Externalized Hostility
7. Acknowledgment
8. Adjustment