

# **Midterm Report**

## **I PRO 309**

### **Education and Technical Support of Prosthetics and Orthotics in Latin America**

Illinois Institute of Technology

Chicago, IL

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#### **Instructor**

Kevin P. Meade

#### **Team Members**

Ross Allen

Elliot Barlow

Lydia Bengert

Seth Buntain

Marisa De Nicolo

Cristina Kovacs

Robert LaRue

Emily Moore

Gregory Quandt

Stefanie Rozborski

Heather Selby

## **1.0 Revised Objectives/Goals**

### *Primary Objective*

The primary objective has not changed. The main effort of this project is to support the development of the first Category III International Society of Prosthetics and Orthotics (ISPO) accredited program in Latin America.

### *Secondary Objectives*

The secondary objectives are necessary for accomplishing the primary objective. To ensure that the program in Latin America will be accredited, many guidelines must be followed; these guidelines have set the secondary objective as follows:

- Develop several educational modules concerning the general population distribution based on age
- Develop several low-cost demonstrations and hand-outs to compliment the educational modules
- Carefully follow ISPO requirements to ensure accreditation
- Translate all material to Spanish for use in Latin America
- Develop educational materials regarding conditions affecting pediatric, adult, and geriatric populations to be presented at a four-day conference in Bogotá, Colombia

## **2.0 Results to Date**

The team has divided into three sub-groups to organize the previously researched pathologies as well as new ones into age-defined categories and to create new educational modules within these age groups. Work will continue until April 10<sup>th</sup>, when all sub-team materials are due. In addition, the following team tasks and objectives have been completed.

- Each sub-team has completed two drafts of the educational modules, and submitted them to the entire team for review. Each sub-team received feedback from the class on how their presentations can be improved.
- Three team members and faculty advisor attended the IPRO Games.
- Three team members and faculty advisor attended the Project Management Seminar.
- One team member and the faculty advisor attended the Ethics Seminar.
- The team completed the Project Plan.
- The team completed the Code of Ethics.
- The team completed the Midterm Presentation; seven team members presented the Midterm Presentation. The faculty advisor attended.
- March 11<sup>th</sup> IPRO 309 was visited by, Andrés Tovar Pérez, Ph.D., Profesor Asociado, Director Académico Universidad Nacional de Colombia, Sede Bogotá (Associate Professor and Director of Academics at National University of Colombia).

### 3.0 Revised Task/Event Schedule

The work breakdown structure has been updated to show the completion of the Project Plan, Midterm Presentation, Code of Ethics, and subgroup progress reports. Consequently, the 'hours left' field of the Gantt chart has been adjusted to show zero hours of work remaining for the tasks that have been completed. As of yet, tasks related to IPRO deliverables are 61% complete whereas tasks concerning subgroup research are 38% complete. Significant progress has been made thus far as the project is already 56% complete from a task achievement standpoint. An estimated 312 hours of work from all team members remains. No major changes have been made to the timeline of events since all tasks have been completed on schedule. Attached is the complete task list and Gantt chart with filename s08\_309\_MidTerm\_Report.pdf.

### 4.0 Updated Individual Assignments and Team Organization

Project team member assignments have not altered except for the addition of Cristina Kovacs, from IPRO 309 Fall 2007, as Assessment Tools Developer. The revised list of team assignments is below.

- *Project Manager:* Emily Moore. The project manager oversees all of the operations as well as announces daily meeting agendas. The project manager also ensures all administrative tasks are being taken care of as well as informs team members of deliverable deadlines.
- *Project Content Manager:* Seth Buntain. The content project manager oversees the production of the educational materials as well as instructs subgroups on what is expected of them for each deliverable. The content manager also ensures all deliverables are submitted on time.
- *Webmaster:* Lydia Benger. The webmaster will create a website to make all educational materials available to the public in English and Spanish.
- *Vocabulary Manager:* Marisa De Nicolo. The vocabulary manager will compile the pertinent vocabulary from each of the three subgroups into one easy-to-use note sheet.
- *Minutes Recorder:* Heather Selby. The minutes recorder will record all group discussions at the meetings as well as post any deadlines that have been decided upon on iGroups.
- *Poster Designer:* Stefanie Rozborski & Heather Selby. The poster designers will create the poster for IPRO Day and collect all pertinent information from each subgroup.
- *Time Sheet Coordinator:* Stefanie Rozborski. The time sheet coordinator is charged with tracking team member timesheets.
- *Work Schedule Specialist:* Robert LaRue. The work schedule specialist manages the team's work breakdown structures and progress.
- *International Conference Coordinator:* Ross Allen. The international conference coordinator is responsible for the planning and arrangements regarding the conference in Bogotá, Colombia in May.

- *Ethics Consultant:* Elliot Barlow. The ethics consultant is tasked with attending the ethics workshop, preparing the ethics statement, and working with the other team members to produce the finalized Code of Ethics.
- *Presentation Skills Consultant:* Greg Quandt. The presentation skills consultant will attend the Presentation Skills workshop, report back to the other team members, and assist all subgroups in the creation of final presentations.
- *Assessment Tools Developer:* Cristina Kovacs. The assessment tools developer shall develop a pilot program to gather feedback from students in orthotics and prosthetics programs.

In addition, there have been no changes to sub-team assignments and the breakdown of teams is as follows.

#### *Pediatric Work Breakdown Structure*

The responsibility of the pediatric subgroup is focused on creating an educational module about prosthetic and orthotic treatments for the pediatric age group; to accomplish this, the individual tasks have been assigned as follows:

- Lydia Bengner, Mechanical Engineering
  - Definition of normal functioning and activities of daily living (ADL)
- Robert LaRue, Mechanical Engineering
  - Treatment of pathologies arising after birth
- Stefanie Rozborski, Art History
  - Treatment of in utero and congenital pathologies

#### *Adult Work Breakdown Structure*

The Adult subgroup is tasked with the creation of an educational module for orthotic and prosthetic technicians on the particular issues and pathologies associated with the adult population. This group of subjects is defined as those that are principally associated with individuals between the ages of 20 and 55.

- Ross Allen, Aerospace Engineering
  - Biomechanics, Pathologies, Statistics
- Elliot Barlow, Aerospace Engineering
  - Vocabulary, Orthotics needs, use, and construction
- Seth Buntain, Aerospace Engineering
  - Prosthetics needs, use, and construction

#### *Geriatric Work breakdown structure*

The objective of the Geriatric subgroup is to create an educational module that overviews the geriatric population in regards to orthotic and prosthetic treatment and how it may affect their lives. For research purposes, the geriatric subgroup will focus on individuals generally of the age 50 and above. As people age, their physical health care

needs change considerably. O&P technicians must be trained to compensate for this. The tasks within the subgroup are divided as follows:

- Marisa De Nicolo, Mechanical & Materials Science Engineering
  - Materials and fabrication of Orthotics & Prosthetics
- Emily Moore, Aerospace Engineering
  - Daily Living: Lifestyles at old age, Potential obstacles
- Gregory Quandt, Mechanical & Materials Science Engineering
  - General well-being: mental, emotional, & physical health
- Heather Selby, Biomedical Engineering
  - Availability of care, Common ailments

All sub-teams are working according to schedule and expect to complete sub-team work by April 10<sup>th</sup>. This work includes the educational module, low-cost demonstrations, and vocabulary handout sheet.

## **5.0 Barriers and Obstacles**

With any project, there are always obstacles that come along the way and must be conquered in order to achieve set goals and objectives. For IPRO 309, this is indeed the case.

One obstacle is drawing the line between age categories. For example, the geriatric subgroup does not want to ignore common pathologies that might be specific to both the adult and geriatric populations and yet, at the same time, the subgroup does not want to take away from the adult subgroup's work. Likewise, it is also difficult to determine when childhood ends and adulthood begins. Avoiding unnecessary duplication of effort is a primary goal.

Furthermore, another obstacle is narrowing down what information should go into the educational module. While there is a vast amount of information available, the challenge is to find the information that would be most useful and influential to an orthotic and prosthetic technician in training.

As the project continues, IPRO 309 has high hopes of overcoming all obstacles and achieve all secondary objectives so that progress can be made towards the completion of the primary objective, to support the accreditation of the first Category III ISPO program in Latin America.