

COVER SHEET
NEW DEGREE PROGRAM PLANNING NOTIFICATION OF INTENT
(PLANNING NOI)

Program Information

Program Name: Prosthetics-Orthotics Curriculum
Institution Name: University of Washington
Degree Granting Unit: School of Medicine
(e.g. College of Arts and Science)

Degree: Masters of Prosthetics-Orthotics Level: Masters Type: Prosthetics-Orthotics
(e.g. B.S. Chemistry) *(e.g. Bachelor)* *(e.g. Science)*

Major: Prosthetics-Orthotics CIP Code: 51.2307
(e.g. Chemistry)

Minor _____

Concentration(s): _____
(if applicable)
Proposed Start Date: Autumn 2011

Projected Enrollment (FTE) in Year One: 12 At Full Enrollment by Year: 2012 24
(# FTE)

Proposed New Funding: _____
Currently being explored

Funding Source: State FTE Self Support Other

Mode of Delivery

- Single Campus Delivery University of Washington campus
(enter locations)
- Off-site 15 Clinical rotation sites in the Greater Seattle region
(enter locations)
- Distance Learning _____
(enter locations)

Substantive Statement of Need

Attached Sheet

Contact Information (Academic Department Representative)

Name: Jean Deitz
Title: Professor
Address: Box 356490
Telephone: 206-5396
Fax: 206-685-3244
Email: deitz@u.washington.edu

Endorsement by Chief Academic Officer

Date

Statement on Need for a Master of Prosthetics and Orthotics

Background Information

The prosthetist-orthotist (P&O) is a health professional educated to provide and manage an individual's orthotic and prosthetic care based on a physician's prescription and his or her own clinical assessment. P&Os provide assessment and provision of services to those with an absence of an extremity, those lacking motor control or strength, and those with musculoskeletal or neurological injuries. P&Os are skilled professionals whose knowledge and abilities bridge the biological, medical, mechanical, and social sciences to provide an individual with comprehensive prosthetic and orthotic care to facilitate independence through restored or improved ambulation/mobility and increased function.

The current practice of prosthetics and orthotics emphasizes collaboration with other health care professionals, the client, and if needed, the client's family and/or caregiver. P&Os work in a variety of settings including private practice clinics, hospitals, rehabilitation facilities, and skilled nursing facilities.

Currently in the United States, there are a variety of paths leading to certification in prosthetics and orthotics. Four universities offer baccalaureate degree programs (University of Washington, University of Texas Southwestern Medical Center, California State University-Dominguez Hills, and St. Petersburg College); four offer post-baccalaureate certificate programs (Northwestern University, Newington, Century College, and California State University-Dominguez Hills); and two offer master's degree programs (Georgia Institute of Technology and Eastern Michigan University).

The University of Washington program accepts 12 students annually and is the only P&O education program in the Pacific Northwest and the WAMI region. The program admitted the first class in 1970 and has graduated over 350 students. It is vitally important that the University of Washington continues to support prosthetic and orthotic education as there is a substantiated shortage of certified practitioners and a demonstrated growing demand for their services.

Substantive Statement of Need

The prosthetics-orthotics profession has seen an evolution of education from a technical model to a clinical model. At the 2005 Orthotics and Prosthetics Education Summit, the attendees (i.e., recognized national leaders in prosthetics-orthotics education, clinical care, and research) affirmed the need to integrate evidence-based practice into the educational process in order to provide graduates with the skills, knowledge, and abilities to critically appraise clinical research evidence; and then integrate this evidence with clinical expertise to form a foundation for effective clinical practice. Based upon this need, the attendees recommended raising the entry-level education in the prosthetics-orthotics profession to the master's level (National Commission on Orthotic and Prosthetic Education, 2005). This recommendation is supported by the increasing responsibilities of the practitioner regarding clinical care and on the recent and profuse advances in device technology and material science. The advancements include, but are not limited to, computer-controlled prostheses and orthoses; functional electrical stimulation;

computer-assisted design and manufacturing; targeted muscle reinnervation; and myoelectric signal acquisition.

A recent study, funded by the U.S. Department of Education and conducted by the American Academy of Orthotists and Prosthetists reported a more favorable ratio of qualified P&O practitioners to potential Medicare beneficiaries in states with CAAHEP (Commission on Accreditation of Allied Health Education Programs) accredited practitioner education programs (Michael, Hubbard, & Smith, 2006). There are currently 35 facilities accredited by the American Board for Certification in Washington State and 132 certified practitioners, of which, 86 are graduates of the University of Washington P&O program. The quality of this educational program ensures the people of Washington State will continue to receive prosthetic-orthotic care from competent and qualified healthcare providers.

Based on the recommendation from the Education Summit, NCOPE, the accrediting body for prosthetics and orthotics education, moved to require that all existing entry-level education programs be at the master's level by 2012. In order to be in compliance with this requirement and to maintain accreditation from NCOPE, the Prosthetics and Orthotics Program, Department of Rehabilitation Medicine, will need to transition from the current bachelor's level to the required master's level, prior to the 2012 deadline and ideally by autumn 2011. As the University of Washington program is the only prosthetics-orthotics program in the Northwest, this transition is essential to providing education and clinical training to individuals in this state and region.

Current Curriculum Information

- a. The transition of the P&O academic program to the master's level will foster the integration of the P&O program with the two graduate programs (Physical and Occupational Therapy) in the Department of Rehabilitation Medicine and increase the efficiency of instruction and maximize departmental resources. At the present time, the P&O academic program spans seven quarters and consists of 106 credits. The core foundational courses are currently taken with the occupational and physical therapy entry-level graduate students.
- b. Over the last eight years, the research course work has increased to include introduction to research methods, completion of a literature review, and the development of a single subject research proposal. PhD level faculty in the Rehabilitation Medicine Department currently teach these courses.
- c. Although the degree has remained at the baccalaureate level, the P&O curriculum has been revised in order to reflect the increasing knowledge and clinical expertise necessary to provide quality client care. The current academic course work level and degree requirements are consistent with a master's level curriculum.
- d. Twelve of the 106 program credits involve clinical placements in the greater Seattle area. These placements are interspersed throughout the length of the academic program. After graduation, each graduate completes a two-year residency (1900 hours in prosthetics and 1900 hours in orthotics) prior to taking the national certification examinations. The National

Commission on Orthotic and Prosthetic Education (NCOPE) administers the residency program.

- e. It is anticipated that the transition to a master's degree program will draw from a larger and more diverse pool of applicants with increased life experiences and varied educational backgrounds. Typically, many of the students applying to the P&O Program already hold baccalaureate degrees.

Proposed MPO Curriculum

- a. The core foundation courses taken with the OT and PT students will remain the same as the current curriculum. The prosthetics-orthotics courses will be reorganized to reflect an integrated approach including both prosthetics and orthotics content.
- b. Evidence-based practice and the use of outcome measures will be threaded throughout the curriculum in all prosthetics-orthotics content courses.
- c. Research instruction will be increased from 6 credits to a total of 12 credits. The Clinical Science Seminar content will provide the student the knowledge and skills necessary to complete a literature review, develop a single subject research proposal, and complete an integrated project. These skills will create the foundation for the development of the prosthetist-orthotist as a clinical scientist with the ability to apply research methods in the evaluation of evidence to guide clinical practice.
- d. Elective courses offered in the final two quarters of the curriculum will focus on advanced topics in clinical care and emerging technology.

The following schedule is the quarter sequence of the proposed curriculum.

YEAR ONE			YEAR TWO		
Autumn Quarter		Credits	Autumn Quarter		Credits
Rehab 403	Exercise Physiology	2	Rehab 414	Psychological Aspects of Rehabilitation	2
Rehab 444	Functional Anatomy	4	Rehab XXX	Lower Extremity P&O II	5
Rehab 451	Anatomy Lab	1	Rehab XXX	Spinal Orthotics	5
Rehab 504	Evaluation Procedures I	2	Rehab XXX	Clinical Science Seminar III	2
Rehab 509	Functional Skills	1	Rehab XXX	Clinical Rotation II/ Clinical Problem Solving	2
Rehab XXX	Upper Extremity/P&O I	4			
Total Credits		14	Total Credits		16
Winter Quarter		Credits	Winter Quarter		Credits
Rehab 445	Functional Anatomy	4	Rehab XXX	Lower Extremity/P&O III	10
Rehab 452	Anatomy Lab	1	Rehab XXX	Clinical Science Seminar IV	2
Rehab 506	Evaluation Procedures II	2	Rehab XXX	Clinical Rotation III/ Implementation Strategies	2
Conj 480	Neuroscience	5	Rehab XXX	Elective/Advanced Topics	2
Rehab 400	Medical Sciences	4			
Rehab XXX	Upper Extremity/P&O II	2			
Total Credits		18	Total Credits		16
Spring Quarter		Credits	Spring Quarter		Credits
Rehab 401	Medical Sciences	4	Rehab XXX	Lower Extremity P&O IV	8
Rehab 442	Applied Kinesiology	4	Rehab XXX	Clinical Science Seminar V	3
Rehab 448	Kinesiology Lab	1	Rehab XXX	Clinical Rotation IV/ Implementation Strategies	2
Rehab XXX	Upper Extremity/P&O III	4	Rehab XXX	Elective/Advanced Topics	2
Rehab XXX	Clinical Science Seminar I/ Introduction to Research	3			
Rehab XXX	Professional and Practice Issues	1			
Total Credits		17	Total Credits		15
Summer Quarter		Credits	<p style="text-align: right;">Total Quarters: 7</p> <p style="text-align: right;">Total Program Credits 110</p>		
Rehab XXX	Lower Extremity P&O I	8			
Rehab XXX	Clinical Science Seminar II	2			
Rehab XXX	Engineering Concepts	2			
Rehab XXX	Clinical Rotation I/ Clinical Problem Solving	2			
Total Credits		14			

Note: Once the transition to the master's level is complete, all 400-level course numbers will be changed to 500-level course numbers.

References

- Michael, J.W., Hubbard, S., & Smith, D.G. (2006). *Geographic Distribution of Qualified Practitioners Compared to Eligible Medicare Beneficiaries Having Diagnoses Commonly Managed with Custom-made Orthoses and Prostheses*. Retrieved October 23, 2007, from <http://www.oandp.org/grants/GeoMap>
- National Commission on Orthotic and Prosthetic Education. (2005). *O&P Education Summit: Forecasting the Future*. Retrieved October 23, 2007, from <http://www.ncope.org/summit>