

July 2010

DRAFT: Master of Prosthetics and Orthotics University of Washington Seattle

Introduction and Overview

The University of Washington (UW) seeks approval to establish a Master of Prosthetics and Orthotics degree program in the Department of Rehabilitation Medicine in the UW School of Medicine, Seattle Campus.

The proposed program would replace the existing Bachelor of Prosthetics and Orthotics (P&O) degree, which has served about 11 students per year since 1972. The change is needed to meet the requirements of a mandate by the program's accrediting body, the National Commission on Orthotic and Prosthetic Education (NCOPE). In 2005, NCOPE changed the professional standards for the program, requiring institutions to replace baccalaureate P&O programs with graduate programs by 2012. Graduation from an accredited program is a requirement for a license to practice in Washington State.

Failure to comply with the NCOPE mandate would reduce degree and employment opportunities for Washington citizens because graduates of the program would no longer be eligible for licensure. In addition, the program already appears to be in a state of transition toward a higher level. About a third of its applicants in the last several years held a bachelor's degree.

The new program would provide students the core competencies and skills needed by present and future P&O practitioners. Graduates would acquire the ability to appraise scientific research, place research in context with clinical experience, and use research to provide effective and ethical clinical care, keeping pace with rapid advancements in P&O technology. The program transition would be supported with resources reallocated from undergraduate to graduate FTE and would not require additional infrastructure or state support.

Relationship to Institutional Role and Mission

A primary mission of the UW School of Medicine is to meet "the health care needs of [the] region...advancing knowledge and assuming leadership in biomedical sciences and in academic medicine," with a "special emphasis on training physicians, scientists, and allied health professionals." The mission of the Division of Prosthetics and Orthotics is to provide education, clinical service, leadership, and research to enhance the lives of persons with limb absence and/or disabling neuromuscular and musculoskeletal conditions.

The UW P&O program is the sole source of practitioner education in the Washington, Wyoming, Alaska, Montana, and Idaho (WWAMI) region. In addition, it is one of only nine such programs in the United States and one of only four west of the Mississippi River. Six of these institutions already offer a post-baccalaureate certificate or degree program.

Diversity

Women make up 58 percent of the UW program participants. Nationwide, women make up 17.5 percent of professional practitioners. Ten percent of the current UW class is from under-represented groups compared to 8.5 percent practicing in the profession nationwide. Twelve percent of the UW students are persons with disabilities.

The program targets outreach to middle and high school students through the UW School of Medicine's Community Outreach program. With approval of the Master of Prosthetics and Orthotics, the program will have access to the outreach efforts of the Graduate Opportunities and Minority Achievement Program and the Office of Multicultural Affairs. Both programs are members of the Department of Rehabilitation Medicine's Diversity Recruitment and Retention Council.

Program Need

The proposal makes a convincing case for continuing the P&O program at UW. There is increasing demand for P&O health services due primarily to an aging population and increased adult obesity and diabetes. A 2007 survey showed that 30 percent of orthotic and 46 percent of prosthetic services are provided to older adults, and the 65-and-older population is expected to grow by 38 percent between 2010 and 2050.

Washington State is ranked fifth among states in the percentage of persons living with disabilities (23 percent) and twenty-ninth for obesity rate (26 percent). About 7 percent of adults in Washington have been diagnosed with diabetes. Another source of demand is returning veterans in need of P&O services, but this factor is minor compared to the other demographic and health trends. NCOPE estimates demand for orthotic care will increase 35 percent by the year 2020, and demand for prosthetic care will increase by 47 percent during the same period.

There are about 5,400 licensed practitioners nationwide, with 143 (3 percent) located in Washington. About 70 percent of the Washington practitioners were educated at the UW. Due in large part to the UW program, the Washington ratio of practitioners to beneficiaries is nearly twice as favorable as the national average. The number of registered practitioners has grown 35 percent in Washington in the last seven years, and at about the same rate for the WWAMI region.

Finally, as stated earlier, the NCOPE education mandate will strip the existing baccalaureate P&O program of its accreditation if it does not become a graduate program by 2012. Graduation from an accredited program is required for a state license to practice in Washington.

The proposed program would enroll 12 students (12 FTE) beginning fall 2011, increasing to 24 enrolled students (24 FTE) by 2012-13, and generate 12 graduates in its second year and each year thereafter.

Program Description

The program's learning objectives are clearly stated and appropriate.

Graduates will:

- Exemplify the role of the prosthetist-orthotist by providing ethical and responsible patient-centered care.
- Demonstrate awareness of humanity and dignity of all patients and individuals within a diverse and multicultural society.
- Serve as knowledgeable, competent, and capable members of multidisciplinary rehabilitation teams.
- Effectively and appropriately communicate with patients, peers, and other clinical service providers.
- Understand, critically evaluate, and appropriately integrate scientific evidence into clinical practice.
- Integrate knowledge of human function and prosthetic-orthotic concepts in the assessment of patients and the formation, implementation, and follow-up of a comprehensive treatment plan.

The 112-credit program would be completed over seven quarters, with students taking 14-17 credits per quarter. The total credit level meets the NCOPE guidelines for accreditation and exceeds the three existing MPO programs in the United States (72-91 credits), and is equivalent to the UW Master of Occupational Therapy program. The existing core foundational courses have been retained but upgraded and revised where necessary to reflect master's level content. Four of the core P&O baccalaureate courses have been revised and expanded into three sections: theory and application, clinical practice, and laboratory. Research credit requirements have been increased from six to nine credits.

The program assessment plan calls for a mix of quantitative and qualitative methods to achieve the program objectives of recruiting highly capable students with diverse backgrounds, preparing graduates for entry-level practice in prosthetics-orthotics, fostering the skills necessary for lifelong learning and professional development, and meeting the workforce needs in the state of Washington and the WWAMI region.

The program would maintain high standards by measuring its success in providing access to diverse groups, by tracking retention and promotion rates, assessing student learning and faculty instructional effectiveness, and through continuous feedback on course and curriculum effectiveness.

Information for Students

Successful candidates for admission will have completed a pre-medicine/health course of study at the baccalaureate level with prerequisite undergraduate coursework in biology/microbiology, physics, anatomy and physiology, psychology, chemistry, and statistics.

For the past 18 months, the UW has been advising baccalaureate students of the pending change in the program and potential changes in program admissions policies. The plan is for the last undergraduate class to enter in Fall Quarter 2010 and graduate in the Spring 2012. In 2011-12, 12 baccalaureate students will finish their studies, and the first group of 12 graduate students will begin their program. The Division is committed to working one-on-one with any baccalaureate student whose program completion is delayed for any reason beyond Spring 2012.

Program Costs

The program is funded by an internal reallocation of existing state FTE funding and institutional resources from the current baccalaureate P&O program, with no request for additional state funding. The reallocation will have no adverse impact on other programs or departments. The program will retain its core staffing level of 3.4 faculty FTE.

In addition, the School of Medicine supports the half-time program coordinator and other faculty who teach in the program – 1.6 FTE for clinical efforts funded by UW School of Medicine at Harborview and 0.5 administrative FTE. Lab fees (\$2,444 per FTE student in Year 2, rising 5 percent per year) will pay for lab supplies, equipment costs, and other lab-related expenditures.

By full enrollment in the second year, the program will cost an estimated \$451,000, or \$18,800 per FTE (somewhat higher than the *2005-06 Cost Study* average direct cost per AAFTE figure for UW-Seattle graduate-level health programs of \$15,273). Total program revenues are estimated at \$458,000 in Year 2, roughly equivalent to total costs.

External Review and Comments

The program was reviewed by two external reviewers. Susan Kapp, Associate Professor and Director at the University of Texas at Dallas, Southwestern Medical Center provided succinct and almost entirely positive comments, citing the program's faculty as its major strength. She observed that credits dedicated to upper extremity orthotics appeared to be low in comparison to those dedicated to upper extremity prosthetics. Faculty responded that that the material in question is covered in other courses in addition to that specific course.

Alicia Davis, professor at the University of Michigan's Department of Physical Medicine and Rehabilitation provided more extensive comments and a longer list of concerns.

Her concerns included the following:

- A faculty load that she thought was too heavy.
- Lack of clarity regarding the individual growth plan for measuring student outcomes.
- A requirement for clinical rotation hours that appeared to be below NCOPE standards.
- Concerns about the design of the Graduate Project Seminar as a “capstone seminar.”
- Lack of delineation of how “lifelong learning skills” will be measured.
- Concerns regarding use of the ABC examination results for program assessment purposes.
- Training for clinical preceptors using an evaluation tool.
- The purpose and goals of planned annual preceptor meetings.
- Inadequate resources for program coordination/administration (0.5 FTE).
- Lack of discussion of equipment needs in the proposal.

UW staff provided the HECB with a list of specific changes that were made to the final proposal based on the constructive feedback provided by the reviewers. In most instances, the issue was already addressed and just needed to be drawn out and better described in the proposal. In other cases, changes to the program were made based on the comments.

Some of the changes include:

- Faculty are working with the UW Center for Instructional Design and Research to explore ways to increase teaching efficiency and lighten faculty teaching loads.
- Teaching loads have been redistributed among program faculty.
- The use of Individual Growth Plans was replaced by Professional Development Plans.
- Clinical rotation hours were increased from 320 to 400 hours.

Staff Analysis

The proposed program would support the UW’s mission and is of great benefit to the state and the region. The proposal makes a compelling case for transitioning the existing program from the baccalaureate to the graduate level. Failure to do so would jeopardize continued program accreditation and licensure of newly-trained P&O professionals.

The University of Washington has submitted a thoroughly documented proposal with a well-developed plan for transitioning the P&O program from the baccalaureate to the graduate level. Doing so will impose no additional costs on the state and the program will continue to be state supported.

Staff Recommendation

After careful review of the proposal and supporting materials, staff recommend HECB approval of the UW Masters in Prosthetics and Orthotics program.

RESOLUTION NO. 10-14

WHEREAS, The University of Washington proposes to replace its existing Bachelor of Prosthetics and Orthotics program with a new Master of Prosthetics and Orthotics degree program beginning in 2011; and

WHEREAS, The new program would respond to a mandate by the accrediting body, the National Commission on Orthotic and Prosthetic Education, requiring institutions to replace baccalaureate prosthetics and orthotics programs with graduate programs by 2012; and

WHEREAS, Graduation from an accredited program is a requirement for a professional license to practice in Washington State; and

WHEREAS, The UW has documented the continuing and increasing demand for prosthetic and orthotics professional services, due primarily to an aging population and increased incidence of adult obesity and diabetes; and

WHEREAS, The program has support from external reviewers; and

WHEREAS, The program is one of only a handful of its type in the United States; and

WHEREAS, The program would be supported with resources reallocated from undergraduate to graduate FTE, and would not require additional infrastructure or state support;

THEREFORE, BE IT RESOLVED, That the Higher Education Coordinating Board approves the Master of Prosthetics and Orthotics at the University of Washington, effective July 15, 2010.

Adopted:

July 15, 2010

Attest:

Jesús Hernandez, Chair

Roberta Greene, Secretary