Graduate Program in Physical Therapy & Rehabilitation Science

Strategic Assessment for Submission to the
Task Force on Graduate Education’s Request

Mission

The mission of the Graduate Program in Physical Therapy and Rehabilitation Science (PTRS) is “to advance the health of humankind by 1) excellence in education, 2) discovering new knowledge through research, and, 3) developing leaders in healthcare and science”. Our vision is to be recognized nationally and internationally as the leader in clinical practice, research, and education. We are fortunate to maintain a top 3 rating among public institutions among 200 programs throughout the United States (US News and World Report, 2009).

The PTRS Program offers three degrees including the Doctor of Physical Therapy (DPT), Doctor of Philosophy in Rehabilitation Science (Ph.D), and a Master’s Degree in Physical Therapy (MA). The DPT is a terminal degree program leading to the professional licensure to practice physical therapy. The DPT program is a three-year equivalent program that runs consecutively over 2.5 years (through two summers). The curriculum consists of 101 credit hours and admits 108 total students (36/year). The Ph.D. in rehabilitation science prepares students for tenure-line faculty positions (15-20 students) with a primary emphasis in rehabilitation research. Over 80% of our faculty members support Ph.D. students through funding from the National Institutes of Health (NIH). For the purposes of this report, we will focus first on the DPT program followed by the Ph.D. program.

Doctor of Physical Therapy Program (DPT)

Admission Processes & Criteria

We established a rigorous selection system to admit outstanding future clinical practitioners within our program. Applicants must minimally attain a 3.0 grade point average in undergraduate work. Criteria for selection include academic excellence in the biological sciences, excellent GRE scores, outstanding recommendations, prior experience in physical therapy through volunteer/work experiences, and strong communication skills. We screened 289 applicants, interviewed 75, and selected 36 students for the class of 2009. The table below shows the GPA and GRE statistics for the students who have enrolled in the past five years (2005-2009).

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</thead>
<tbody>
<tr>
<td>Total # of Applicants</td>
<td>289</td>
<td>157</td>
<td>131</td>
<td>99</td>
<td>98</td>
</tr>
<tr>
<td>Number of Students Enrolled</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>35</td>
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<tr>
<td>GPA of Students Enrolled</td>
<td>3.77</td>
<td>3.68</td>
<td>3.73</td>
<td>3.62</td>
<td>3.59</td>
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<tr>
<td>GRE of Students Enrolled</td>
<td>1172</td>
<td>1136</td>
<td>1141</td>
<td>1119</td>
<td>1137</td>
</tr>
<tr>
<td>Verbal</td>
<td>482</td>
<td>490</td>
<td>478</td>
<td>484</td>
<td>478</td>
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<tr>
<td>Quantitative</td>
<td>690</td>
<td>645</td>
<td>663</td>
<td>635</td>
<td>659</td>
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<tr>
<td># of Minority Student Applicants</td>
<td>20</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td># of Minority Students Enrolled</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td># of Students Graduating</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>37</td>
<td>33</td>
</tr>
<tr>
<td># of Nonresidents Offered Adm</td>
<td>11</td>
<td>12</td>
<td>14</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td># of Nonresidents Enrolled</td>
<td>5</td>
<td>8</td>
<td>8</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>
We have recruited outstanding students, but have a need for greater ethnic diversity. However, we have a strategic plan in place to increase our success in enrolling under-represented minority students. We are doing this through a combined effort from the College of Medicine Office for Diversity to assist our recruitment efforts. Most of our ethnically diverse applicants are from out of state. Our out of state tuition for the entire program (~$87,000) is nearly twice that for in-state students. We typically are successful in enrolling only 50% of the nonresidents to whom we offer admission. The typical reason relates to financial constraints and personal/family issues. We are quite successful in enrolling Iowa residents from all areas of the state. The Program has relatively little scholarship money. However, through tuition enhancement funds we can usually provide students about $5,000 over the course of the 2½ years in the program if they demonstrate financial need.

**Program Outcomes**

We have several metrics that support our sustained top 5 ranking among over 200 programs in the United States.

We have a low attrition rate (5% averaged over the last 5 years). Usually attrition is due to medical or personal reasons. In the last 5 years only one graduate required more than the standard 2½ years to complete the DPT degree. Placement and employment as physical therapists is 100%.

We have sustained a 100% first time pass rate on the National Physical Therapy Examination for several years. Only 19 out of 200 graduate physical therapy programs in the United States achieved a 100% pass rate for 2008. The national average for first time pass rate for all U.S. programs is 85%. Fifty-five percent (55%) of our graduates stay in Iowa, many in rural communities serving the elderly.

We aggregate our ACE teaching evaluations as a benchmark for teaching. On a 6-point scale, with 6 being the highest, our average score for the department is 5.4.

We are currently rank 2nd among all physical therapy programs for the number of scientific peer review publications each year (*Physical Therapy* 2006).

We received our first federal research grant from the NIH in 1998. Today, 5 of our 6 faculty members are supported by NIH (3 R0-1’s, 1 K12, 2 K0-1’s).

**Program Characteristics**

Given the program’s mission, size of faculty, teaching space, and clinical education sites available to our students; we believe the total enrollment of 108 students is appropriate and optimal. Our program accomplishes our mission with 6 tenure-track faculty and 4 associates. The tenure track faculty members, in addition to extensive teaching in the DPT curriculum, teach and lead research laboratories in the Ph.D. program (Rehabilitation Science). We also have a clinical skills evaluation team consisting of 28 adjunct faculty members from the physical therapy community throughout the state of Iowa who donate ~ 2-4 hours per year to our program.
**Program Strengths & Challenges**

The strengths of the Graduate Program in Physical Therapy and Rehabilitation Science are the committed faculty and staff who take great pride in delivering an exceptional academic program to our students. The collaborations and support in the Carver College of Medicine (UI Healthcare) facilitates our vision to become the premier program in physical therapy and rehabilitation science both nationally and internationally.

Our greatest challenges are a direct result of our success. That is, we believe that an excellent education in rehabilitation requires that those discovering new knowledge in the field are actively engaged in the classroom. Five of our six tenure-track faculty members have NIH research funding, but also maintain heavy teaching loads. Our challenge is to modify the load by recruiting equally capable Ph.D. scientists with a gift for teaching, a task that is not trivial as the number of potential federally funded physical therapists is relatively small. To this end, a major challenge is that we have no available research space to assist in the recruitment of this unique new faculty member. An additional challenge is that we must retain our outstanding faculty members by rewarding them, even at a time when budgets are tight. This is vital because the other top 10 programs in the country are searching, as we are, for great teachers who can garner federal support to advance knowledge in rehabilitation.

**Conclusions**

The future is bright for the entire physical therapy profession. Physical Therapy is a key cog in the wheel of health care reform because it is instrumental in reducing hospital lengths of stay and reducing costs. Our application numbers continue to rise, which bodes well even during a time of economic strife. We need to grow our Ph.D. faculty despite challenging economic times. All metrics support that the Graduate Program in Physical Therapy and Rehabilitation Science is a program of excellence and well positioned to flourish over the next 5 years. Timely investment in the correct people will be vital to sustaining this program in the future.

**PhD in Rehabilitation Science**

The PhD program in Rehabilitation Science has a long and distinguished history at The University of Iowa, with 61 PhD graduates since 1978. Prior to 1998, the PhD track offered by our faculty was in the Exercise Science Department. Since 1998, our 6 graduate faculty mentored 24 Ph.D. students. Thus, over a 30-year history of Ph.D. training, over 40% of the total graduates graduated in the last 10 years. This represents, on average, 4 Ph.D. graduates per faculty member over the last ten years. Over 60% of our graduates currently hold tenured or tenure-track academic positions in over 30 states around the country as well as internationally. We have been successful in recruiting top students into our program as evidenced by their admissions statistics (GPA 3.63; GRE 1133) and their success in obtaining highly competitive post-doctoral fellowships and tenure-track faculty positions.

Our program has a rolling admissions policy. We expect a minimum of 1100 on the GRE and a GPA of 3.0 or better upon admission. We admit students from diverse backgrounds with a keen interest in advancing knowledge in rehabilitation.

All of our full time students receive 25-50% assistantship support while matriculating for the Ph.D. The sources of these funds are as teaching assistants or research assistants from federally
supported grants. Over the last 10 years, we have received one presidential fellowship and three strategic initiative fund grants. Our students have garnered over $300,000 of support from the Promotion of Doctoral Studies Program from the Foundation for Physical Therapy Incorporated. Several students receive pre-doctoral traineeships from the National Institutes of Health.

The graduate college lists the median time to degree completion as 7.3 years. However, this includes time of enrollment into the professional degree clinical physical therapy curriculum and the time they take to practice physical therapy for several years. If enrollment is restricted to the time working on the Ph.D. degree, then it takes, on average, 5.3 years to complete a degree in Rehabilitation Science. Our completion rate is 62%. In the past 5 years, our graduate students have authored/co-authored nearly 50 manuscripts in peer reviewed journals and book chapters. In addition, the students regularly participate and present their research at numerous and diverse meetings which include the Combined Sections Meeting of the American Physical Therapy Association, Society for Neuroscience, Annual meeting of the American Pain Society, World Congress on Pain, International Society of Biomechanics.

We currently have 6 graduate faculty within our program, which limits the size of our program to admission of 2-3 new students per year. With a graduate rate of 2-3 students per year, the result is a constant number of 12-18 students in the program at any one time. Our faculty research interests include areas in neuroscience, biomechanics, and orthopedics. We also span the range of experimental paradigms from basic science (molecular biology, anatomy, physiology, pharmacology), applied science (physiology, biomechanics, mathematical modeling, imaging) to clinical trials. Rehabilitation science is by nature a translational and multidisciplinary specialty. We have strong, established collaborations with faculty in more than 10 other programs and departments in the University and numerous others nationally and internationally. This allows students who want to study rehabilitation science a wide variety of opportunities.

We believe our department’s high ranking is based on our strong research component, active faculty, and legacy of training a great majority of physical therapy faculty throughout the United States. We currently run our program at near maximal capacity due to the low number of faculty available to train and fund students. While the majority of our faculty members (5/6) have federal support, we have a limited number of slots that can be filled on external funds. Thus, we depend extensively on students obtaining external funding, on graduate assistantships.

In summary, our Ph.D. program is unique in that it is one of the longest standing programs in the country. There are few programs in Rehabilitation Science with strong research methods in place to train PhD students (we are the only program in Iowa). We are able to recruit high quality students who serve on the faculty of many prestigious institutions both nationally and internationally. The DPT program and the Ph.D. program work synergistically to advance the science and practice of physical therapy throughout the world.