December 27, 2009

To: Phyllis M. Wise, Provost and Executive Vice President
          Douglas J. Wadden, Executive Vice Provost for Academic Affairs and Planning

From: Gerald J. Baldasty, Vice Provost and Dean
          James S. Antony, Associate Vice Provost and Associate Dean for Academic Affairs

Re: Review of the Department of Medical Education and Biomedical Informatics

This memorandum outlines the Graduate School's recommendations on the review of the M.S. and Ph.D.
degree programs offered by the Division of Biomedical and Health Informatics (BHI) located within the
Department of Medical Education and Biomedical Informatics. Detailed comments on the review can be
found in the documents referred to below. The review included the following milestones and documentation.

- Department self-study (February 1, 2009)
- Charge meeting between the review committee and administrators (April 3, 2009)
- Site visit (April 20-21, 2009)
- Graduate and Professional Student Senate (GPSS) Report (April 22, 2009)
- Review committee report (June 4, 2009)
- Biomedical and Health Informatics response to committee report (July 9, 2009)
- Graduate School Council consideration of review (November 19, 2009)

The review committee consisted of:

David Notkin, Professor, UW Department of Computer Science and Engineering (Committee Chair)
Rodney Schmidt, Professor, UW Department of Pathology
Jennifer Turns, Associate Professor, UW Department of Human Centered Design and Engineering
Reed Gardner, Professor Emeritus, Department of Biomedical Informatics, University of Utah
George Hripcsak, Professor and Chair, Department of Biomedical Informatics, Columbia University

A subcommittee of the Graduate School Council presented findings and recommendations to the full Council
at its meeting on November 19, 2009.

Program Strengths

Biomedical and Health Informatics is "an extremely good, young program" with an "excellent and dedicated
faculty and high quality students." The faculty has a strong national reputation in biomedical informatics.
There is strong leadership from the Division Chair and the graduate program Director. The Division recently
hired talented junior faculty who are active in research and teaching.

Several interdisciplinary programs across the University provide opportunities for student training. The unit collaborates with the central computing services, IT Services, of the UW Medical Center/School of Medicine. The Division Chair received an informatics training grant from the National Library of Medicine that was renewed in 2007, through which 18 trainees are funded. Students are trained in emerging health and research-related areas such as: the development of electronic medical records from ARRA seed money and private source; development and maintenance of in-house, local, and national databases that store health, genetic and other types of personal information for hospitals, clinic, law enforcement, and state and federal agencies; and storage and accessing research findings in databases. The GPSS reported overall student satisfaction with the program and they would recommend it to prospective students seeking a BHI degree.

The curriculum is well-balanced and regularly updated in response to changing paradigms and student demands, but due to overall faculty workloads the Ph.D. program curriculum revision was low priority.

Challenges and Risks

Vision is the primary challenge for BHI. The review committee noted it is "a great program with a somewhat fuzzy image." Opportunities exist in the field but the division must define a clear vision of its immediate and long-term goals for research and program curriculum. Space is also a challenge for BHI. Faculty, staff, and students are located in "nooks and crannies and trailers" which is problematic for further program development and expansion. The GPSS reported that students felt there was not a cohesive community due to the lack of a central location for faculty and students. Another issue is the high staff turnover which is problematic from many viewpoints.

BHI's decentralized structure complicates its administration, e.g., the allocation of indirect cost return funds is problematic, leaving BHI taking the "short-end of this stick." Its faculty appointment structure also presents a challenge with core program faculty having primary appointments in other academic units. More faculty with primary BHI appointments would help with issues of "research fund flow" and would afford BHI and its participating faculty credit for their activities. The committee urged current faculty to work toward having more grants administered through the unit.

BHI's national reputation is excellent but it needs more visibility and recognition locally and regionally. To address this issue, BHI is strengthening its ties with ITS at UW Medicine/Hospital to provide opportunities for students in clinical computing. Improved space would also help in this area. To remain competitive with other programs and to address changing needs of trainees, the M.S. needs to be developed into a professional Master's degree in Biomedical Informatics, and in the long-term, a Board Certificate in Clinical Informatics needs to be developed. Graduate students expressed the need for flexibility by having teaching and research assistantships during their first year, when they take courses, and for the NLM fellowships to start the second year when they begin their research.

Areas of Concurrence

The faculty agreed with the committee's recommendation for continuing status, with a review in 10 years. It considered the report to be a fair and accurate evaluation of BHI's accomplishments, its strengths, and the areas to be improved. It will incorporate the recommendations into its strategic plan. The revised strategic plan will guide discussions with the faculty, staff and students, its internal and external advisory boards and in the unit's decision making. BHI's stated goal "How should we take the next big step?" will help to clarify its vision and enhance its visibility.

Graduate School Council Recommendations

The Council made the following recommendations in accord with those of the review committee. The Council recommended continuing statue for the M.S. and Ph.D. degree programs, with the next review to be in 10 years (2018-2019).

- Enhance the Division's vision and image;
- Improve the Division's organizational structure;
- Consolidate and increase space for BHI faculty and students
- For the School of Medicine Dean's office: Provide BHI with an explicit roadmap about what must be contributed to make consolidation and expansion of space possible;
- Continued retention of the NLM training grant;
- Become more actively engaged in developing and evaluating electronic health records;
- Conduct faculty and leadership planning;
- Consider augmenting the Master of Science program and clinical informatics programs;
- Improve professional development for graduate students.

We concur with the Council's comments and recommendations.

c: John Slattery, Vice Dean for Research and Graduate Education, School of Medicine
       Frederic Wolf, Professor and Chair, Department of Medical Education and Biomedical Informatics
       Peter Tarczy-Hornoch, M.D., Professor and Division Head, Division of Biomedical and
              Health Informatics
       George Demiris, Graduate Program Director, Division of Biomedical and Health Informatics
       Biomedical and Health Informatics Review Committee
       Graduate School Council
       Jacob Faleschini, President, Graduate and Professional Student Senate
       Augustine McCaffery, Senior Academic Program Specialist, The Graduate School