



Department of Physics
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MEMORANDUM

To: Scott Gordon, Chair
Educational Policies and Planning Committee

From: Michael Dingfelder
Assistant Chair for Graduate Studies in Physics

Date: January 6 2012

Subject: Approval of new concentration within the PhD program in Biomedical Physics

The Physics Department is proposing a new concentration for the PhD program in Biomedical Physics “*Integrated PhD in Biomedical Physics and MS in Physics – Medical Physics concentration*”. The concentration (together with some changes to the PhD program) has been approved by the Graduate Curriculum Committee (GCC) (see September 7 2011 minutes) and the Graduate School Administrative Board (GSAB) (now Graduate Council; see September 26 meeting minutes).

The Physics Department is running successfully the PhD program in Biomedical Physics and the MS program in Physics with concentrations in Applied Physics, Medical Physics and Health Physics. The Medical Physics concentration is accredited by CAMPEP (Commission on Accreditation of Medical Physics Educational Programs). Some of our PhD students are interested in Medical Physics and do dissertation research in this area. In order to be eligible to become Board certified and work as a Medical Physicist they need to graduate from a CAMPEP accredited program. The MS concentration in Medical Physics is accredited but not our much more general PhD program in Biomedical Physics. However, almost all required courses from the MS concentration in Medical Physics are also part of the PhD program; in fact all of our graduate programs are heavily entangled.

Official enrollment in (independent) dual degrees causes another problem we try to avoid. The MS concentration in Medical Physics is considered a professional degree and is now self-supporting. Admission to the Medical Physics concentration is also highly competitive (last year we had 50 applicants for our 8 available spots), mainly due to our space limitations for the Clinical Rotation (capstone course). On the other hand, our PhD program supports our research. PhD students in general are supported and we need them desperately as teaching assistants in our introductory laboratories. This situation caused the problem that we had students seeking admission to the PhD program, only completing the MS – Medical Physics requirements and then “dropping” out of the PhD program.

After discussions with the Graduate School (Dean Paul Gemperline) and Academic Program Planning and Development (Associate Provost Linner Griffin) we suggest creating a new concentration in our PhD program to tie the two degrees together. This will allow us to both control enrollment to the Medical Physics program and award both degrees together upon graduation.

Technically, the new concentration is just combining two existing and established programs.

In addition to the new concentration a revision of the PhD in Biomedical Physics in order to be able to accept highly qualified students with baccalaureate degrees into the PhD program was proposed. The GCC and GSAB approved the revisions together with the new concentration.

When the PhD program in Biomedical Physics was created it was designed as a post-masters program due to the interdisciplinary nature of the program. Over the years the program emphasis and the research agenda in the Physics Department reoriented towards a stronger Physics component in the program. The program now attracts more highly qualified students holding baccalaureate degrees in Physics and related fields to apply for the PhD program. In order to accept these highly qualified students into the PhD program we propose to revise the PhD program to also accept highly qualified applicants with a baccalaureate degree only. These students will follow the Applied Physics concentration course curriculum of our Masters in Physics program (without doing a thesis) in addition to the requirements for post-masters applicants.

I attach as courtesy also the approved catalogue copy for the revised PhD program.