

CWSEI – PHYS & ASTRO Newsletter

October 2010

Our department has always been committed to high standards in education. Recently, with support and leadership from the CWSEI, we have made increasing progress in successfully implementing research based educational methods in our classrooms. An increasing number of our faculty are showing keen interest in these developments. In response, we distribute this monthly newsletter to keep you up-to-date with the latest CWSEI efforts.

In this issue, Natasha Holmes, Sandy Martinuk and Christian Veenstra review the TA training and mentorship program.

by Natasha, Sandy and Christian: TA Training Facilitators

For the past four years, the Physics and Astronomy department has held training for incoming graduate students and teaching assistants (TAs) to prepare them both for their immediate TAship and their continued role as teachers in general, with emphasis on first-year physics courses. This training is run entirely by graduate students and has evolved to include a core workshop for all TAs as well as ongoing course-specific training and a mentorship program. Early funding and guidance from the CWSEI was key in developing this program, which is now jointly funded by the Physics department and UBC's TA Training Fund.

The core workshop is run by three graduate student facilitators and is a full day event during the first week of classes. It focuses on practical teaching skills that would benefit participants with minimal previous teaching experience, regardless of the course they will be teaching. Attention is paid to both teaching skills as well as learning skills, in order to give new TAs the resources they need to learn the most from their in-class experience and become better teachers over time. Topics presented include *From Learning to Teaching*, *Teaching by Questioning*, *Learning goals in the lab*, *Formative Evaluation* and *Diversity*. Details about these modules as well as all teaching materials can be found on the training website (www.phas.ubc.ca/~phas_ta). Throughout the term, additional training workshops that focus on topics specific to a particular course are run by Course-Specific Training Facilitators (CSTFs), with one CSTF assigned to a single course. These workshops allow the inclusion of course-specific

topics such as marking, as well as topics that are more productive after TAs have gained some firsthand teaching experience. Currently only the TAs for the large first-year physics courses participate in these additional workshops (Phys 100, 101, 153 and 107).

The mentorship program runs alongside these workshops to support TAs' continued development as teachers. Every new TA is assigned a Mentor TA who facilitates extensive personal follow-up on the new TAs' professional development throughout their first term. This happens through in-class observations and one-on-one discussions about the new TAs' teaching experiences and goals, as well as facilitated peer-review where new TAs observe each other in pairs. This model of continuous professional development helps TAs absorb and integrate the material discussed in the core workshop. Although the core workshop follows a very hands-on approach, it is vital to encourage new TAs to practice techniques with real students and then reflect on the effectiveness of both the techniques and their implementation.

Each year exceptional TAs are recommended by instructors to join the TA Training team. The previous year's facilitators will then meet with the interested individuals and determine their fit in the program, either as a facilitator, Mentor or CSTF. That is to say, we are always on the lookout for hard-working, motivated TAs to fill these positions.

The benefits of the program have been confirmed by comprehensive surveys as well as TA testimonials:

"As an incoming graduate student it was basically the only thing I received good, clear, useful instruction about. It was nice to walk into the lab on the first day and actually feel prepared for what I was about to do."

"(The training) provides good concrete ideas for how to approach teaching, and it makes the TA aware of how his or her teaching might be improved."

"Having a TA training program really improves the overall quality of teaching and shows that UBC is taking teaching seriously."

The TA Training team is always open to suggestions from faculty for topics that they would like their TAs trained in, or nominations of excellent TAs to work in the program. Contact Natasha at nholmes@phas.ubc.ca or Christian at veenstcn@phas.ubc.ca.

PHYS-ASTRO Science Education Research Team