Friday, October 31, 2008: topics around "ASTRO 101"

Strategies for Success:

1. Teach both Solar System course and Stars and Galaxies (some students prefer one but not the other.
2. Stop in the middle of class and ask for student questions.
3. Demonstrations are generally popular. (More challenging with stars and galaxies course.) Could get students to participate in demonstrations (e.g. to play molecules)
4. Applets can be engaging.

How many TAs per class section? How are they used? Answers varied:

1. 1 per 100-200 students
2. some lead discussion sections
3. work as tutors and graders for homework and labs
4. mostly graduate students: undergrads can be very enthusiastic (and cheap) but require more supervision and training.

What kinds of training do TAs receive?

1. Typically a couple of days at the beginning of the year.
2. Can have experienced TA coordinate other TAs
3. Most training is about general issues (sexual harassment, fairness, confidentiality, etc.) with little subject matter instruction.

Evaluations:

1. Most institutions have some form of student evaluation of instructors. Usually these are not connected to student performance or other demographic data.
2. Some have chair or peer evaluations of instructors, especially for probationary faculty.
3. U Toledo uses students (trained and paid through a campus-wide assessment center) to provide feedback to instructors.

Merit pay:

1. Both internal merit and external merit pools are used. Internal merit can be awarded by faculty members or chair from internal salary pool. External merit is by chair recommendation to dean or provost from external pool.
2. Most deans will not permit a department to nominate all faculty as meritorious.

Temporary staffing arrangements:

1. U Toledo
    a. Visitors (3 year limit – no reappointment possible)
    b. Lecturers (5 year limit - reappointment possible)
    c. Adjunct (primarily research faculty affiliation)
2. Pay rates for 3-credit course: anywhere from $2000 to $10,000

Budget Issues:

1. many cuts: already made and more expected to come
2. perhaps most severe at state universities

Exobiology courses (at least 6-8 such courses offered):

1. can be a very big draw
2. good opportunity for team teaching (geology, astronomy, chemistry, biology)
3. as a text, some liked "Extrasolar Planets and Astrobiology" by Calib Scharf (University Science Books, ISBN-13: 978-1891389559)

International Year of Astronomy:

1. Some states are appointing Space Grant Ambassadors
2. Summer workshops could be effective.

Post-doc Mentoring:

1. not as urgent a need in astronomy (small community) as in larger fields with big labs, like biology or medicine
2. graduate students may be more at risk than post-docs for exploitation
3. UK system focuses on transferable skills (team work, presentation skills, etc.)

Broader Impacts Requirement in NSF Grants, and public outreach:

1. Some feel that requiring outreach of all research grant recipients is not a good investment. [In fact, many other activities meet this requirement too.]
2. Training Graduate Assistants and post-docs is another aspect of Broader Impact.
3. Public Education Centers can't meet the demand for outreach.
4. Some universities have staffed positions to assist with outreach activities.
5. Public contact with even an imperfect live human scientist may be better than none.