UW-Physics
Overview of Undergraduate Program

- lots of students served
  -2300/ semester in intro "service courses" and general education courses
  -200/ semester in courses for physics majors

- small but enthusiastic population of majors
  -30 graduates/ yr
  -we would like to attract more
    -matriculate in excellent graduate programs and non-academic careers

- personnel
  -48 faculty
  -undergraduate committees
    Coordinator of UG programs (Peter Timbie)
    Introductory Courses/Labs (Lynn Knutson)
    Intermediate and Advanced Courses/Labs (Don Cox)
-Instructional Program Manager (Jean Buehlman)
-Laboratory Manager (Joe Sylvester)
-Instructional Computing (Bill Grogan)
-Lecture Demonstrations (Steve Narf)
-Advisors
Assessment of Introductory Service Courses

- enrollment stable
- surveys of clientele
- SymBiosis Program
- LINKS Program
- "Physics for Entrepreneurs" course?
- lab improvements, need for more
  - developed web-based manual
  - faculty members assigned to upgrade
  - visit to a lab
- careful planning of move to Chamberlin
- lecture demonstration facilities, need more faculty oversite
Assessment of TA Training

• what we do

• TA workload is heavy -- 20 hours/week
  -discussion sections
  -labs
  -consultation hours

• new teaching forum

• shortages of TA's in recent past
Assessment of Courses for Majors

- Physics, AMEP, Astronomy/Physics
- review of course sequence
- honors/non-honors
- independent (directed) study at all levels
- UG colloquium (Physics 301)
- senior thesis
- lab improvements
  - need for more stable funding
  - need support for new intro sequence (Physics 247/8/9)
- new computer lab
- new courses
  - intro series for majors (Physics 247/248/249)
  - computing course (Physics 433)
  - intro to general relativity and cosmology (Physics 406)
Assessment of UG Major Program

- Walker Committee report (1998), alumni survey

- research laboratory experience is a strength
  - hourly
  - Sophomore Summer
  - Hilldale
  - Senior Thesis

- Physics Club (University Physical Society)
  - field trips, tutoring, sonoluminescence
  - need to increase faculty involvement
  - help organize a poster session?

- advising
  - advisors
  - mentor program
  - written and web information
  - SOAR, LSAC, Career Advising

- placement of graduates in grad school, other careers
Outreach

- alumni newsletter
- Wonders of Physics (Sprott)
- recruitment network, letters to HS seniors
- Physics Learning Center similar to Chemistry and Math programs
- resume monthly evening lectures?
- science education program for HS teachers?
UG Program Documents

Welcome to Physics letter from Chair
10-Year Course Enrollments, Semester I and II
Annual State of the UG Program Report
Assessment Report of UG Program (Walker Committee)
Course Descriptions
Fall, Spring 2000-2001 Course Timetable
Undergraduate Major Survey
  -total
  -physics
  -astronomy/physics
  -AMEP (applied math, engineering, and physics)
UG Handbook
AMEP program
Physics Peer Mentor Tutor Program
Lab Modernization Funding
New 1st-year course for majors: Physics 247 announcement
Department Assignments
University Physical Society
Physics Mentor Program
Lab Manuals
  109
  100-series
  200-series
Undergraduate Program Action Items

- How can we make our service courses more useful to students?
  - smaller courses for focussed audiences (P247, 8, 9)
  - train TA's to be more effective (group problem-solving in discussion?)
  - expand Peer Mentor Tutor Program. Need support here!

- How can we make our major program more useful to students?
  - improve advising program
  - develop a career-advising program, network with alumni

- How can we make our labs more useful to students?
  - TA training -- lab manual for TA's
  - more faculty oversight of labs - making this a teaching assignment

- How can we help faculty to teach their best and adopt advances in teaching techniques?
  - teaching forum (Cox)
  - peer review of teaching?

- What can we do to help local K-12 education?
  - how can we start a Physics Learning Center?
  - start a science education program for HS teachers?

- Ensure that we have suitable space in remodeled Chamberlin