

## \* “TUNING” PHYSICS

What it is. How it might help strengthen our degrees. What it asks of us.

## \* What Is “Tuning”?

- \* Multi-institution process (state-wide in our case)
  - \* Across educational sectors (universities to community colleges)
  - \* Faculty and Student representatives jointly define what a student must
    - \* Know
    - \* Understand
    - \* Be able to do
- to qualify for a degree* in physics at associate, bachelor, and masters levels.

- \* Focus on what students learn more than on what is taught
  - \* Focus departmental discussions on learning rather than on teaching
  - \* Focus interactions with students on what they are learning and why
  - \* Focus assessment on the learning outcomes
  - \* Report to accreditors on what students have learned and how it has been assessed

\* Furthering a **Cultural Change** that has been initiated by accreditors and our institutions

- \* Common reference points for physics
  - \* Degree-level Learning Outcomes
- \* Institutional autonomy in
  - \* Curriculum
  - \* Pedagogy
  - \* Assessment

\* **Same Key, Not Unison**

- \* Faculty consult other stakeholders, while faculty define the discipline
- \* Students
- \* Alumni
- \* Employers
- \* Policy makers
- \* Administrators, Advisors, Librarians
- \* K-12 representatives

## \* Tuning Consultations

- \* Focus on and improve student learning
- \* Gain insight through consultations with employers & others
- \* Strengthen program quality, efficiency, & coherence
- \* Assure quality through assessment of LOs
- \* Provide accountability
- \* Bring transparency to students, employers, . . .

## \* Goals

- \* Using degree-level LOs developed by the state team
- \* Review our curriculum to correlate LOs with our courses and levels
  - \* E.g. Do we prepare students to move into the upper division curriculum or transfer by the end of two years?
  - \* Which courses address which LOs? Do we adequately address all of them? Could we do it more efficiently?
  - \* Etc.

## \* What Does Tuning Ask of us?

- \* Using degree-level LOs developed by the state team
- \* Review our assessment practices to confirm student accomplishment of LOs as degree requirements
  - \* E.g. Can we certify what students know, understand, and are able to do when they receive a bachelor degree from our program?
  - \* Map LOs to assessments. Do we adequately assess all of them? Could we do it more efficiently?
  - \* Etc.

## \* What Does Tuning Ask of us?

- \* Using degree-level LOs developed by the state team

- \* Make expectations embodied in LOs explicit for students

- \* E.g. Do we share and discuss the LOs with our students right at the beginning of the major curriculum so they can see what is expected and why?

- \* Make expectations embodied in LOs clear to employers

- \* Let employers know what they can expect of our graduates

**\*What Does Tuning Ask  
of us?**