The SPIN-UP Report and its role in developing a ‘rising’ thriving physics program

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SPIN-UP Report


SPIN-UP report

- [http://www.aapt.org/Programs/projects/ntfup/](http://www.aapt.org/Programs/projects/ntfup/)

SPIN-UP at two-year colleges

- [http://www.aapt.org/Programs/projects/spinup/spinup-tyc.cfm](http://www.aapt.org/Programs/projects/spinup/spinup-tyc.cfm)
SPIN-UP Report

- Departmental Leadership
- Mission and Vision
- Substantial Majority of Engaged Faculty
- Administrative Support
- Supportive, Encouraging and Challenging Environment and Recruitment
- Advising
- Career Mentoring
- Introductory Physics Courses
- Flexible Majors’ Program
- 3/2 Dual-Degree Engineering Programs
- Undergraduate Research
- Physics Clubs and Commons Room
- Mentoring for New Faculty
- Informal Student/Faculty Interactions
- Alumni Relations
- Physics Education Research
During my time as Department Chair

• Arrived in Fall 2007; 4.5 graduates/year; \( \approx 20 \) majors.
• Within 1 year, 3 different Deans; within 2 years, President changed; within 3 years, 3 different Provosts.
• FTEF went from 5+ to an average of 4.5 FTEF.
• Goods & Services budget went from \( \approx \$13.2k \) to \( \approx \$6.2k \).
• 1 recommendation to combine department with another.
• 2 recommendations to eliminate one of two possible degree options (Bachelor of Arts; physics teaching).
• From 2007 to 2013, enrollment increased by about 4-fold.
Number of Physics Degrees

My first and last year as Department Chair

Academic Year

Elements of the SPIN-UP Report that existed (i.e. what we were doing well)

- Focus on a high quality undergraduate education.
- Award winning Society of Physics Students organization.
- Numerous opportunities for formal and informal faculty/student interactions. All physics majors given the opportunity (via degree requirement) to participate in a faculty mentored research experience. Students/faculty are supported and encouraged to perform research related to Physics Education.
- Existing dual-degree physics/engineering program that was strengthened through a formal articulation agreement with Washington State University.
Elements of the SPIN-UP Report that were implemented: Recruitment

- Enhanced recruitment to the University.
  - Using ACT/SAT scores to identify prospective students.
  - Reach out to each prospective student (via e-mail and telephone).
  - Enhance recruitment efforts using scholarships and tuition waivers.

- Enhanced pairing of physics faculty with courses in which their students can thrive.
  - Best recruiters in the introductory courses.
  - Up to 80% of SCH production performed by TT faculty.

- Lots of other ideas: open houses; site visits; etc.
Elements of the SPIN-UP Report that were implemented: Retention

- Pro-active academic advising all performed by the Department Chair. Attempted to create an environment where the students always felt welcome.
- Utilized existing Supplemental Instruction (SI) and Tutor preparation programs to assist with supporting our upper-division students. This was enhanced with the development of a Learning Assistant (LA) program with PhysTEC funding.
- Also with PhysTEC funding, we were able to develop a Physics/Math Education dual-degree articulation agreement – a great way to grow our BA degree program.
- Lots of other ideas: formal/informal interactions (first-year or pre-year/lunch seminars, etc.).