

Dr. Steve Good
Department of Geology & Astronomy
West Chester University of the State System of Higher Education of Pennsylvania
A Regional Comprehensive University

University 13,500 students, southeastern PA (30 mi from Philadelphia)
Department 75 majors in 3 majors; 11 faculty (2 astronomers, 1 meteorologist, 8 geologists)
BS Geoscience (career path: environmental consulting, few to grad school), 40%
BS Earth Systems (career path: environmental consulting) 20%
BS Earth & Space Science (career path: PA teaching certification) 50%
MA Physical Science (Professional degree for in-service teachers)

Metrics of success (staff, space, resources):

- our department was awarded two faculty searches this year (we requested only one),
- 2000 square feet of office space was transferred to us from the Biology Department
- our department received a financial award based on productivity

Why Geology & Astronomy is valued on campus:

- Department Chair: high seniority among the other chairs, served as chair of our Dean's search, served as chair of campus tenure and promotion committee, produces effective department reports
- High profile of other faculty on campus, (productive researchers with undergrad students, participate in and facilitate campus pedagogical workshops, serve on campus governance committees often in leadership roles).
- Teach general education courses that are popular, engaging, and pedagogically sound (as recruitment venue for majors, and to maintain enrollments for FTE productivity)

Nature of the student community in the department. Students community development is achieved by a moderately active geology club (with about 4-6 functions a year), and by providing a student room in the department. Community enhancement will be further improved by a new common core of courses required by all of our majors (to encourage community building in labs and field trips).

Faculty Vision, Collaboration & Curriculum. Regional comprehensive university students tend to be career focused, and our department graduates have excellent career opportunities (in a thriving local geology consulting industry and growing school populations with teacher shortages). A curriculum revision that was driven by external mandates (see below under challenges) was implemented in the Fall of 2003. Internal department debate weighed the goals of graduate program expectations versus professional certification requirements (see below) within the context of a substantial credit reduction (all baccalaureate programs limited to 120 credits). Our department maintains communication with alumni working as geologists and teachers in the region. We use this communication to focus on knowledge and skills necessary for our students' success after graduation and to provide internship opportunities to current students.

Challenges turned to opportunities. University administrators are applying business models to determine success of departments. Business terms applied to academia include productivity, efficiency and accountability. Failure of academic departments to meet these challenges can result in business-style consequences (you're fired).

- Productivity is measured by class size and graduation rates. The PA State System of Higher Education (SSHE) has established an "FTE" ratio which mandates an average

class size of 23.25 and incentives to achieve 23.82. A second metric is the number of graduates from a department, with “low-enrollment” status conferred on programs graduating fewer than 12 students in the past year. Efficiency in SSHE has been implemented by a directive that undergraduate programs not exceed 120 credits. Accountability is measured by a department generated and university approved assessment plan and by external accreditations.

- The productivity mandates require that introductory classes be larger enrollment yet engaging in order to recruit majors. Productivity mandate also requires attention to recruitment, retention, and graduation. The efficiency mandate has required a curriculum overhaul to reduce BS program from 128 to 120 credits, and our BSEd program from 134 to 120 credits. SSHE accountability values standardized test results that compare our students’ results with other universities. BS students mostly enter environmental consulting and will have to pass the ASBOG Fundamentals of Geology test and complete required courses in order to achieve PA Professional Geologist Certification. BSEd students become earth science teachers and are required to pass the Praxis Earth Science Content Knowledge test, and complete required courses required by the PA Department of Education and by the National Science Teachers Association (part of NCATE accreditation). While the curriculum revision reduced credits, it also is designed to meet the competencies required for licensure of our students.

Recruitment and retention: Our department actively recruits prospective new students (at campus open houses) and from students in the general education science courses. We have attempted to facilitate program completion by transfers to the department (both native and community college transfers) To facilitate late program changers and post-baccalaureate career changers, we have taken four actions.

- The department developed the BS Earth Systems track that is a curricular hybrid of the BS and BSEd programs.
- The department provides experiences for freshman and sophomores to work with public school students; participate in faculty research; volunteer with the local USGS office, or intern with an environmental firm.
- We host a “Careers in the Earth Sciences Workshop”. We invite three alumni (a teacher, a USGS or EPA scientist, and a private sector environmental geologist) to briefly describe entry salaries, academic and experiential preparation, a typical day at work, etc.. We then have two breakout sessions, where students interact in small groups with 2 of the 3 guests. Freshman and Sophomore students who participate in the workshop are less prone to senior program changing and more likely to do internships.
- We have modest grants programs available for incoming students and for upper division majors from the generosity of an emeritus faculty member’s donation.