Physics at ASU

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Overview

- 9 faculty (7.75 FTE) possess the terminal degree
- BS Physics program with concentrations in physics and applied physics/pre-engineering
- Over 160 declared majors
- 6-year average bachelor production rate is 10
- 50% of graduates attend graduate school, 50% gain employment
Effectiveness Plan

- **Mission** – to promote inquiry, literacy, and service within the physical sciences.

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<tr>
<th>Goal</th>
<th>Objective</th>
<th>Assessment</th>
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<tr>
<td>Pursue excellence student learning</td>
<td>Graduates will be prepared for professional post-baccalaureate education programs.</td>
<td>MFT and GRE-Physics data as reported by Institutional Effectiveness Report.</td>
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<td>Conduct undergraduate research with students</td>
<td>Faculty will provide research opportunities for undergraduate students.</td>
<td>4X91 data and faculty research data reported in annual faculty evaluation.</td>
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<td>Serve the university, local, and scientific communities</td>
<td>Faculty and students will support local, regional, and national professional organizations.</td>
<td>Faculty membership and participation (esp. leadership roles) in professional organizations reported in annual faculty evaluation.</td>
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Plan drives departmental hiring, merit, promotion, and tenure decisions.
Policy

• Governance and Organization document defines committees and their function.
• Function is always linked to University Policy.
• Tenure and curriculum are the most important!
• There must be a policy to remove faculty resistant to change.
Viability

• Provide graduates with a quality degree which offers future opportunities.
• Operate in the black with reasonable losses to the University.
• Gain and retain respect of the academic community.
Achieving Viability

• Structure a flexible degree which enables students to enter many fields of graduate study or employment.

• Teach quality service courses in an efficient manner to earn funding which will offset losses in major courses.

• Build a reputation of quality for your program on campus.
When it Comes to Students

• Provide ample information on opportunities such as REU’s, internships, employment, and graduate programs.
• Build a strong student organization (SPS)
• Actively recruit on and off campus
• Articulation agreements
• Celebrate the success of your graduates
Our Degree Program

• 120 hour BS degree
• Aligned with AAPT guidelines
• Physics – 8 hours introductory sequence, choose 22 h concentration in physics or applied physics/pre-engineering, choose remaining 12 hours from advanced physics lab courses
• Any minor possible
Service

• University Planetarium/GIC
• Physics-on-the-Road
• Public school Science Nights
• Physics Teacher Quality
• High School Physics Program
Best Practices

• Come from national professional organizations
• Documented through exit surveys
• Results communicated to faculty, students, and administration
• Should drive curriculum and resources
Current Challenges

• TTU System strategic priorities to “increase enrollment and promote student success” and to “expand and enhance research and creative scholarship”

• Texas Strategic State Workforce Investment Plan ties energy production degree plans to budgets.
Solutions

• Will involve growing enrollment and finding ways to reduce time to graduation.
• Will require a culture shift from teaching to research.
• Will include an energy production certificate, minor, MS Interdisciplinary Science, or an AA to BS program with Howard College.