Graduate Program Review
Texas Tech University

Program Reviewed: Physics


Name of Reviewers

Internal:
Please include name, title, and Department
H. Scott Norville, Professor and Chair, Department of Civil and Environmental Engineering
James Dickens, Professor, Department of Electrical and Computer Engineering
Kevin Long, Associate Professor, Department of Mathematics and Statistics

External:
Please include name, title, and Department
John W. Mintmire, Head and Regents Professor of Physics, Oklahoma State University
Mark L. Weaver, Professor, Department of Metallurgical and Materials Engineering, The University of Alabama

I. Academic Unit Description and Strategic Plan

Please evaluate the following:

Vision, Mission and Goals
__ Excellent ___ Very Good ___ Appropriate ___ Needs Improvement

Strategic Plan
__ Excellent ___ Very Good ___ Appropriate ___ Needs Improvement

Please elaborate if you have identified any items in this section as Excellent.

Click here to enter text.
Please elaborate if you identified any items in this section as Needs Improvement. Provide recommendations in the area of Strategic Planning.

Other comments (optional)
1. Vision statement is unspecific and very milquetoast, but is fairly typical for Physics departments at peer institutions.
2. Faculty should address the resources invested in the Ph.D. preliminary exam. Although the department’s process is probably consistent with peer institutions across country it appears to the committee to require a significant investment of resources and a high degree of inefficiency.

II. Program Curriculum
Please evaluate the following:

Alignment of program with stated program and institutional goals and purposes
__ Excellent __ Very Good __ Appropriate __ Needs Improvement __ N/A

Curriculum development coordination and delivery
__ Excellent __ Very Good __ Appropriate __ Needs Improvement __ N/A

Program learning outcomes assessment
__ Excellent __ Very Good __ Appropriate __ Needs Improvement __ N/A

Program curriculum compared to peer programs
__ Excellent __ Very Good __ Appropriate __ Needs Improvement __ N/A

Please elaborate if you have identified any items in this section as Excellent.
Click here to enter text.

Please elaborate if you identified any items in this section as Needs Improvement. Provide recommendations in the area of Program Curriculum.
Other comments (optional)

1. The internal committee members wonder if the material is being presented in an appropriate manner and assessment of learning is conducted adequately, why 50% of students flunk the preliminary examination.

III. Faculty Productivity

Please evaluate the following

Qualifications

__ Excellent  _x_ Very Good  __Appropriate  __Needs Improvement  __N/A

Publications

__ Excellent  __ Very Good  _x_ Appropriate  __Needs Improvement  __N/A

Teaching Load

__ Excellent  __ Very Good  _x_ Appropriate  __Needs Improvement  __N/A

External Grants

__ Excellent  __ Very Good  __Appropriate  _x_ Needs Improvement  __N/A

Teaching Evaluations

__ Excellent  __ Very Good  _x_ Appropriate  __Needs Improvement  __N/A

Professional Service

__ Excellent  __ Very Good  _x_ Appropriate  __Needs Improvement  __N/A
Community Service

__ Excellent  __ Very Good  x  Appropriate  __ Needs Improvement  __ N/A

Please elaborate if you have identified any items in this section as Excellent.
Click here to enter text.

Please elaborate if you have identified any items in this section as Needs Improvement. Provide recommendations in the area of Faculty Productivity.
In comparison with peer institutions, the funding level per faculty member is somewhat on the low side. The Physics department has shown wisdom in its hiring focus. The internal review committee members expect the funding situation to improve as the result of the influx of new faculty coupled with the fact that recent hires have been concentrated in growth areas (astrophysics and biophysics) rather than in areas with stagnant funding.

Other comments (optional)
Click here to enter text.

IV. Students and Graduates

Please evaluate the following

Time to degree

__ Excellent  x  Very Good  __ Appropriate  __ Needs Improvement  __ N/A

Retention

__ Excellent  __ Very Good  __ Appropriate  x  Needs Improvement  __ N/A

Graduate rates

__ Excellent  __ Very Good  x  Appropriate  __ Needs Improvement  __ N/A

Enrollment

__ Excellent  __ Very Good  x  Appropriate  __ Needs Improvement  __ N/A
**Demographics**

___ Excellent   ___ Very Good   ___ Appropriate   ___ Needs Improvement   ___ N/A

**Number of degrees conferred annually**

___ Excellent   ___ Very Good   ___ Appropriate   ___ Needs Improvement   ___ N/A

**Support Services**

___ Excellent   ___ Very Good   ___ Appropriate   ___ Needs Improvement   ___ N/A

**Job Placement**

___ Excellent   ___ Very Good   ___ Appropriate   ___ Needs Improvement   ___ N/A

**Student/Faculty Ratio**

___ Excellent   ___ Very Good   ___ Appropriate   ___ Needs Improvement   ___ N/A

**Please elaborate if you have identified any items in this section as Excellent.**

Click here to enter text.

**Please elaborate if you identified any items in this section as Needs Improvement. Provide recommendations in the area of Students and Graduates.**

The 50% failure rate on the qualifying examination seems to be a problem. The problem may lie in how well the expectation of the faculty concerning the examination is communicated to the students.

**Other comments (optional)**

V. **Facilities and Resources**

**Please evaluate the following:**

**Facilities**

___ Excellent   ___ Very Good   ___ Appropriate   ___ Needs Improvement   ___ N/A
**Facility Support Resources**

- Excellent
- Very Good
- Appropriate
- Needs Improvement
- N/A

**Financial Resources**

- Excellent
- Very Good
- Appropriate
- Needs Improvement
- N/A

**Staff Resources**

- Excellent
- Very Good
- Appropriate
- Needs Improvement
- N/A

Please elaborate if you have identified any items in this section as Excellent.

Click here to enter text.

Please elaborate if you identified any items in this section as Needs Improvement. Provide recommendations in the area of Facilities and Resources.

As with most programs on campus, growth in student numbers has exceeded the capacity of the current facilities. Beyond that, interviews with faculty and students as well as the committee’s observations indicate that the existing facilities also require significant improvements to support the teaching and research missions of the department.

Other comments (optional)

Department appears to require some additional IT support.

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**VI. Overall Ranking**

**Overall Ranking**

- Excellent
- Very Good
- Appropriate
- Needs Improvement

Please provide summative conclusions based on the overall review.
Please provide summative recommendations based on the overall review.

Click here to enter text.