The Physics Teacher Education Program Analysis (PTEPA) Rubric

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Monica Plisch, American Physical Society

We acknowledge funding from NSF-0808790 and APS’s 21st Century Campaign for development of the PTEPA Rubric. This work was conducted by Chasteen Educational Consulting and Scherr & Associates.

Please download supporting materials now from http://phystec.org/thriving

Please introduce yourselves in the chat: Who are you and why are you here?

Stephanie Chasteen (Chasteen Educational Consulting)
Rachel Scherr (Scherr & Associates)
Monica Plisch (American Physical Society)
PhysTEC’s ultimate goal

Resolve the shortage of highly-qualified physics teachers in the US by supporting institutions in **producing more high-quality physics teachers long-term.**
What is the PTEPA Rubric and why might it help you?

- What do the best physics teacher education programs do?
- The PTEPA Rubric is a tool to allow you to compare yourself to the best programs in the country.
- So what?
Early feedback on the PTEPA Rubric

- It gives a TAXONOMY of what is involved in physics teacher education
- It is useful to LOOK FOR IDEAS
- It is useful in PLANNING FOR ACTION
- It will be useful to MAKE A CASE FOR RESOURCES
There is a strong institutional commitment to STEM teacher education, supported by policy, rewards, and financial resources.

Evidence of support

- Recognition for PTE program team
- Time for PTE program leaders to engage in PTE activities
- Promotion and tenure in physics teacher education
- There is concrete support from A&S for teacher education.
- A&S support for teacher education.
- A&S for teacher education.
- Staff may include those funded on external grants.
- Staff could include award nominations for PTE, frequent written or verbal recognition at the department or college level, financial rewards, and so on.
- Staff consists of the program leaders plus other personnel who are responsible for the daily operation of the PTE program.
- Members of the PTE program team have received concrete support from administrators (e.g., department- or other academic unit that includes physics and other related disciplinary departments).
- There is evidence of support from administration verbally prioritizing administration strongly (e.g., department- or other academic unit that includes physics and other related disciplinary departments).
- The PTE program has been officially included as teacher education.
- The program is housed in a non-faculty administrative or other staff that support the program, including Teachers in Residence. Staff may include those funded on external grants.
- The program leader(s) are at least one tenure-track physics faculty member has been and is either the formal named physics teacher education program (e.g., UTeach) or the informal collection of (1) courses and experiential learning opportunities for education (STEM, teacher, or physics teacher) could encompass regular inclusion in strategic planning, public declarations of need for programs or educational change, verbal remarks, campus newsletter, significant public recognition of pride for the institution, and with teacher preparation.
- The program has a dedicated operational funding has been through significant public and its work is publicly recognized in institutional mission and strategic priorities are explicitly well aligned with teacher education.
- The program is guaranteed for at least three years.
- External funding is $100K/year.
Outline

- First half of webinar:
  - How was it developed?
  - What have we learned?
- Second half:
  - How can you use it?
What were our methods in developing the PTEPA Rubric?
There is a need for more secondary physics teachers

Only 47% of HS physics classes are taught by a teacher with a physics degree.
- Source: SASS

To increase teacher production by 1 graduate a year is a significant achievement.
How do we help physics programs graduate more quality teachers?

“Thriving programs” = Programs at large institutions consistently producing 5+ highly qualified teachers/year

What are these folks ("thriving programs") doing?
The PTEPA Rubric measures what these thriving programs do.

- Systematically categorizes what thriving* physics teacher preparation programs do.
- Enables emulation of such programs.
- Supports research and knowledge generation.

* Physics teacher education programs at large institutions consistently producing 5+ highly qualified teachers/year

Stephanie Chasteen – The Physics Teacher Education Program Analysis (PTEPA) Rubric
First, created pilot rubric from existing information

1. Teacher Education Program Assessment (TEPA; Coble, 2012)
2. Council for Accreditation of Educator Preparation (CAEP)
3. PhysTEC Key Components
4. Task Force on Teacher Education in Physics (T-TEP)
Applied at 8 thriving programs

All were members of 5+ club*, half received PhysTEC funding, variety of program structures. More detail in “Thriving Programs” report.

- 2-day program visit, meeting with a variety of personnel
- Rated on rubric
- Shaped rubric to reflect observations at growing dossier of programs.
- Applied at next program.
- Over 20 iterations of rubric.

Questions before we explore the rubric itself?

* 5+ Club = Programs graduating 5 or more highly qualified teachers
### 3 levels per item

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Present (NP)</td>
<td>Item is not present in the program.</td>
</tr>
<tr>
<td>Developing</td>
<td>The program performs better than a typical U.S. institution of higher education on that item.</td>
</tr>
<tr>
<td>Benchmark</td>
<td>The program performs at a recommended level on that item.</td>
</tr>
<tr>
<td>Exemplary</td>
<td>The program is among the best-performing on that item.</td>
</tr>
</tbody>
</table>
### Item 2B-2: Positional Power

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</table>

**Example item**

- At least one member of the team is tenure-track.
- At least one member of the team is tenured.
- At least one member of the team holds positional power in the department.
There are ~90 items with 3 levels of achievement
Organized into 6 Standards and 3-4 Components of those standards.
Item 2B-2: Positional Power

<table>
<thead>
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Where is it in the rubric?

- Standard 2: Leadership & Collaboration
  - Component 2B: Program Team Attributes

Example item

Item 2B-2: Positional Power

Where is it in the rubric?

- Standard 2: Leadership & Collaboration
  - Component 2B: Program Team Attributes
Let’s pause to explore

Use the Rubric (PDF) or Snapshot to get a sense of the instrument.

- Can you find where we address collaboration with education? Where we address student teaching?
- Does this organization make sense?
- What surprises you?
- Questions?

Coming up next…. What we’ve learned from the rubric, how to use it, and rating your institution.

Stephanie Chasteen – The Physics Teacher Education Program Analysis (PTEPA) Rubric

Chasteenconsulting.com
Is the PTEPA Rubric measuring what we want it to measure?

Hypothesis: The PTEPA Rubric measures things that thriving programs do.

The PTEPA Rubric has demonstrated
- **substantive validity** (a strong theoretical basis),
- **content validity** (good alignment with other instruments and research), and
- **face validity** (review by experts and site leaders).

See “A Study of Thriving Physics Teacher Programs”.
Claims we are not (yet) making

• We don’t know if strong ratings on the PTEPA Rubric mean that a program produces a large number of quality physics teachers.

• We don’t know if improving PTEPA Rubric ratings will increase the number of quality teachers produced by a program.

Future validity studies: Reliability, predictive validity, and process validity. Looking for partners in this research, and data.
The end result is an instrument that...

- Characterizes the practices and structures observed at thriving physics teacher education programs.*
- Provides a specific, objective, and reliable guide for physics teacher educators seeking to improve their programs.
- Supports research on physics teacher education programs.

*The PTEPA Rubric focuses on areas specific to physics teacher education, avoiding areas in the sole domain of the school of education.
What has been learned so far about thriving programs?
Thriving programs are consistently strong in certain items

We call these items “Prevalent”

Prevalent items are those for which 75% of studied programs achieve at least “Benchmark” level, and meet one of 3 measures of confidence in that rating.

See Thriving Programs Study for more.

### Thriving Programs Study

#### Prevalent Items

**Standard 1: Institutional Commitment**
- 1A-1 University-level support for STEM education
- 1A-2 Institutional mission of teacher education
- 1A-3 Administrative recognition for physics teacher education (PTE) program
- 1C-1 Engaged staff
- 1C-2 Institutional funding
- 1C-3 External funding

**Standard 2: Leadership and Collaboration**
- 2A-1 PTE program leaders
- 2A-2 PTE program team
- 2A-3 Teacher in Residence (TIR)
- 2B-1 Common vision among the PTE program team
- 2B-2 Positional power
- 2B-3 Disciplinary expertise
- 2B-4 Personal motivation to improve PTE
- 2B-5 Integration of Teacher in Residence (TIR)
- 2B-6 K–12 school engagement
- 2B-7 Physics Education Research (PER) expertise
- 2B-8 Professional engagement in PTE
- 2C-1 Communication across units on PTE program elements
- 2C-2 Negotiated roles between units
- 2C-3 Boundary crossers
- 2C-4 Collaboration with PTE mentor on student teacher placement

**Standard 3: Recruitment**
- 3A-1 Physics majors
- 3A-2 Physics-aligned majors
- 3B-1 Physics teaching advisor
- 3B-2 Physics teaching ambassador
- 3B-3 Accurate information about career benefits of teaching
- 3C-1 Attractiveness of early teaching experiences
- 3C-2 Exposure to intellectual challenge of teaching
- 3D-1 Streamlined undergraduate teaching track in physics

**Standard 4: Knowledge and Skills for Teaching Physics**
- 4A-1 Physics degree for physics teacher candidates
- 4C-1 Number of cooperating physics teachers for field experiences
- 4C-2 Quality of field experiences
- 4C-3 Quality of field experience classrooms
- 4D-1 University supervisor collaboration with PTE team
- 4D-2 University supervisor experience
- 4D-3 Quality of cooperating teachers for student teaching

**Standard 5: Mentoring and Professional Support**
- 5A-1 Student community in physics
- 5B-1 Advising of physics teacher candidates
- 5B-2 Mentoring of physics teacher candidates by a PTE mentor

**Standard 6: Program Assessment**
- 6A-1 Annual graduation from PTE program
- 6A-2 Annual recruitment in PTE program
- 6B-1 Tracking program metrics
- 6B-2 Feedback from stakeholders
- 6C-1 Communication within the university
- 6C-2 Communication with university administrators

List of all Prevalent items
Across 8 sites: Percent of items rated at each level

What do you make of this? What does this tell you? Discuss in chat.
Thriving programs are not strong on ALL items. Even thriving programs aren’t rated at Exemplary level across all items. Percent of items rated at Benchmark or higher ranged from 64-89%.
Here is data on each standard, per site.

What does this tell you?

Strength of 8 programs in each standard.

<table>
<thead>
<tr>
<th>Standard</th>
<th>A</th>
<th>B</th>
<th>C</th>
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Fully shaded = majority Exemplary. Light shaded = majority Benchmark+
Thriving programs are strong in multiple PTEPA Rubric standards.

A broad range of activities occur in these programs (rather than a narrow set of strategies).

Strength of 8 programs in each standard.

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Fully shaded = majority Exemplary.
Light shaded = majority Benchmark+.
Thriving programs are most consistently strong in first 2 standards.

Institutional Commitment and Leadership and Collaboration have the greatest number of Benchmark and Exemplary ratings.

Percent of PTEPA Rubric items in each standard rated at each level, across 8 programs.
How would you use the rubric?

Discuss briefly in chat
Hold a PTEPA Party!

Team approaches:

- Series of meetings
- Single retreat
- Focus on certain sections of the rubric
- Do individually, then as a group

**who?**
You and your physics teacher education (PTE) program team and other relevant stakeholders.

**what?**
Work together to complete and discuss the Physics Teacher Education Program Analysis Rubric*, choosing the most descriptive ratings for your program, discussing the meaning of the data, and deciding on next steps.

**why?**
We can best make sense of data and use it for improvement when we work together and talk it through.

**when?**
Anytime! You may wish to take advantage of natural times to focus on strategic planning and reflection, such as:
- Program planning
- Preparing annual reports
- Preparing to make a case for program resources
- Preparing a talk or presentation
- Department strategic planning
- Department or college retreats

**how?**
Below are some possible formats for your group (allow about three hours, including time to come to consensus and clean up your ratings):

- Series: A series of shorter meetings (e.g., one standard per meeting).
- Retreat: A single longer meeting.
- Segmental: Focus on certain sections of the rubric with certain groups.
- Individual: Complete the rubric individually and then meet to discuss as a group.
- Coached: Invite a PhyTEC evaluator to act as a reflective coach.

**so what?**
- What is your evidence for your ratings?
- Where do you disagree?
- What other information do you need?
- What have you learned, and what surprises you?
- What response is required?

**then what?**
Look at your results as a whole and determine your plan for action! Share your data with stakeholders to generate program support.

* phytec.org/driving
**Two versions: fixed PDF and interactive Excel**

*Many thanks to Claudia Fracchiolla for development of the interactive Excel version*

### Excel (interactive)

#### Standard 2: Leadership and Collaboration
The program has an effective leadership team, including effective collaboration between physics and education.

#### Component 2A: Program Team Members
The program consists of a team \(^1\) whose members enable effective leadership.

<table>
<thead>
<tr>
<th>Component</th>
<th>Possible attributes at Developing Level</th>
<th>Possible attributes at Benchmark Level</th>
<th>Possible attributes at Exemplary Level</th>
<th>More Information Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2A-1</strong></td>
<td>Program leaders include at least one faculty member.</td>
<td>Program leaders include two faculty members.</td>
<td>Program leaders include three or more faculty members.</td>
<td><strong>O</strong></td>
</tr>
<tr>
<td><strong>2A-2</strong></td>
<td>Team consists of one person in addition to the leader(s).</td>
<td>Team consists of two people in addition to the leader(s).</td>
<td>Team consists of at least two people in addition to the leader(s), at least one of whom is a faculty member.</td>
<td><strong>O</strong></td>
</tr>
<tr>
<td><strong>2A-3</strong></td>
<td>There is a part-time physics TIR, or there is a science TIR (at any FTE).</td>
<td>There is one FTE physics TIR.</td>
<td>There is more than one FTE physics TIR.</td>
<td><strong>O</strong></td>
</tr>
<tr>
<td><strong>2A-4</strong></td>
<td>There is a science TAG.</td>
<td>There is a physics TAG (significant physics teacher membership).</td>
<td>There is a physics TAG that is readily available for consultation by the PTE team.</td>
<td><strong>O</strong></td>
</tr>
</tbody>
</table>
Now rate yourselves on Standard 2: Leadership

- Use the Excel version of the rubric if you can.
- Get as far as you can in 5 minutes – try to do at least a few in Component 3.
- Use chat for questions
- Check out the Overview and Report tabs after you have done your rating.
Here is the “overview” tab from the interactive rubric.

**Your PTEPA Rubric Results**

The length of each bar represents the percentage of items falling at the given level (NP/ Developing / Benchmark / Exemplary) for that Standard or Component. The shading represents the level achieved, with the lightest shade representing NP, and the darkest shade Exemplary. The center line represents the division between Developing and Benchmark, to aid you in identifying areas where your program does not meet Benchmark status. See http://phytec.org/thriving for more information on interpreting your results.

### ALL PTEPA STANDARDS

#### STANDARD 1: INSTITUTIONAL COMMITMENT
- Component 1A: Institutional Climate and Support
- Component 1B: Reward Structure
- Component 1C: Resources

#### STANDARD 2: LEADERSHIP AND COLLABORATION
- Component 2A: Program Team Members
- Component 2B: Program Team Attributes
- Component 2C: Program Collaboration

#### STANDARD 3: RECRUITMENT
- Component 3A: Recruitment Opportunities
- Component 3B: Recruitment Activities
- Component 3C: Early Teaching Experiences for Recruiting Teacher Candidates
- Component 3D: Streamlined and Accessible Program Options

#### STANDARD 4: KNOWLEDGE AND SKILLS FOR TEACHING PHYSICS
- Component 4A: Physics Content Knowledge
- Component 4B: Pedagogy Courses and Curriculum
- Component 4C: Practical K–12 School Experiences

#### STANDARD 5: MENTORING, COMMUNITY, AND PROFESSIONAL SUPPORT
- Component 5A: Mentoring and Community Support Toward a Physics Degree
- Component 5B: Mentoring and Community Support Toward Becoming a Physics Teacher
- Component 5C: In-service Mentoring and Professional Community

#### STANDARD 6: PROGRAM ASSESSMENT
- Component 6A: Program Outcomes
- Component 6B: Program Evaluation and Improvement
- Component 6C: Communication to Stakeholders

*Many thanks to Claudia Fracchiolli for development of the interactive Excel version*
Here is how the thriving programs did in Standard 3

Compare to your results in the “overview” tab.
What do you learn?

2. Leadership and Collaboration

2A: Program Team Members
9% 16% 19% 56%

2B: Program Team Attributes
3% 19% 78%

2C: Program Collaboration
9% 11% 17% 63%
Here is how the thriving programs did on the items in Standard 3

Compare to your results in the “overview” tab.

(2A-1) PTE program leaders*
(2A-2) PTE program team*
(2A-3) Teacher in Residence (TIR)*
(2A-4) Teacher Advisory Group (TAG)
(2B-1) Common vision among the PTE program team*
(2B-2) Positional power*
(2B-3) Disciplinary expertise*
(2B-4) Personal motivation to improve PTE*
(2B-5) Integration of Teacher in Residence (TIR)*
(2B-6) Connections to K-12 teachers*
(2B-7) Physics Education Research (PER) expertise*
(2B-8) Professional engagement in PTE*
(2B-9) Reputation of PTE program team
(2C-1) Communication across units on PTE program elements*
(2C-2) Negotiated roles between units*
(2C-3) Boundary crossers*
(2C-4) Collaboration with PTE mentor on student teacher placement*
(2C-5) University supervisor collaboration with PTE team*
(2C-6) Departmental representation
(2C-7) Collaboration on licensure pathway for physics students
(2C-8) Collaboration on advising for physics teacher candidates
Identify what is most important for your program

See User’s Guide

<table>
<thead>
<tr>
<th>Standard or Component</th>
<th>Importance</th>
<th>Synthesis Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower - Medium - High</td>
<td>Poor - Fair - Good - Very Good - Excellent</td>
</tr>
<tr>
<td></td>
<td>Now</td>
<td>In 3 years</td>
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<tr>
<td><strong>1</strong> INSTITUTIONAL COMMITMENT</td>
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<tr>
<td>1A Institutional Climate and Support</td>
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<td>1B Reward Structure</td>
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<td>1C Resources</td>
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<tr>
<td><strong>2</strong> LEADERSHIP AND COLLABORATION</td>
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<td>2A Program Team Members</td>
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<td><strong>3</strong> RECRUITMENT</td>
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<td>3C Early Teaching Experiences for Recruiting Teacher Candidates</td>
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<td>6C Communication to Stakeholders</td>
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**PART 3: WRITTEN NARRATIVE**

In a written narrative, address the six standards of the PTEPA Rubric. Make the best use of your space to address strengths and gaps of your program in each area that is relevant for your institutional context (you need not give equal space to each standard). Reference the PTEPA Rubric data in your narrative and include visualizations of your PTEPA Rubric data as appropriate. If you have completed the “importance and synthesis ratings” for the rubric, reference those as appropriate.

**Standard 1: Institutional Commitment**

Where does your program demonstrate strength in this standard? Where is there room for improvement?

<table>
<thead>
<tr>
<th>Standard 1: Institutional Commitment</th>
<th>64%</th>
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<tbody>
<tr>
<td><strong>Component</strong></td>
<td><strong>Score</strong></td>
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<tr>
<td>Institutional Climate and Support</td>
<td>87%</td>
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<tr>
<td>Diversity level support for STEM education</td>
<td>DEVELOPING</td>
</tr>
<tr>
<td>Institutional mission of teacher education</td>
<td>DEVELOPING</td>
</tr>
<tr>
<td>Administrative recognition for physics teacher education (PTE) program</td>
<td>BENCHMARK</td>
</tr>
<tr>
<td>Diversity-level support for teacher education</td>
<td>EXEMPLARY</td>
</tr>
<tr>
<td>Arts &amp; Sciences (A&amp;S)-level support for teacher education</td>
<td>EXEMPLARY</td>
</tr>
<tr>
<td>School of education (SoE)-level support for physics teacher education</td>
<td>BENCHMARK</td>
</tr>
<tr>
<td><strong>Action Plan:</strong></td>
<td></td>
</tr>
<tr>
<td>There is a strong institutional commitment to STEM teacher education, supported by policy, rewards, and financial resources.</td>
<td>There is a strong institutional commitment to science, technology, engineering, and math (STEM) teacher education, with physics teacher program prioritization.</td>
</tr>
<tr>
<td>The institutional mission and/or strategic priorities historically support teacher education.</td>
<td>The PTE program has received significant public recognition from administrators, public remarks, campus newsletter, college website.</td>
</tr>
<tr>
<td>There is concrete support from the university administration for teacher education.</td>
<td>There is concrete support from A&amp;S for teacher education.</td>
</tr>
<tr>
<td>Additionally, there is evidence of SoE support for physics teacher education.</td>
<td></td>
</tr>
<tr>
<td><strong>Standard 2: Leadership and Collaboration</strong></td>
<td>0%</td>
</tr>
<tr>
<td><strong>Component</strong></td>
<td><strong>Score</strong></td>
</tr>
<tr>
<td>Reward structure</td>
<td>NP</td>
</tr>
<tr>
<td>Recruitment and tenure in physics</td>
<td>NP</td>
</tr>
<tr>
<td>Time for PTE program leaders to engage</td>
<td>DEVELOPING</td>
</tr>
<tr>
<td>Recognition for PTE program team</td>
<td>DEVELOPING</td>
</tr>
<tr>
<td><strong>Action Plan:</strong></td>
<td></td>
</tr>
<tr>
<td>The institution encourages, supports, and rewards leadership in physics teacher preparation.</td>
<td></td>
</tr>
<tr>
<td>The program leader is engaged in professional development.</td>
<td></td>
</tr>
<tr>
<td><strong>Standard 3: Resources</strong></td>
<td>100%</td>
</tr>
<tr>
<td><strong>Component</strong></td>
<td><strong>Score</strong></td>
</tr>
<tr>
<td>Engaged staff</td>
<td>BENCHMARK</td>
</tr>
<tr>
<td>Institutional funding</td>
<td>EXEMPLARY</td>
</tr>
<tr>
<td>External funding</td>
<td>EXEMPLARY</td>
</tr>
<tr>
<td>Stability of program operational funding</td>
<td>EXEMPLARY</td>
</tr>
<tr>
<td>Program space</td>
<td>EXEMPLARY</td>
</tr>
<tr>
<td><strong>Action Plan:</strong></td>
<td></td>
</tr>
<tr>
<td>The program and leadership team have sufficient resources to run.</td>
<td>The program and leadership team have received modest recognition for engaging in PTE in the past three years.</td>
</tr>
<tr>
<td>The program and leadership team have sufficient resources to run.</td>
<td></td>
</tr>
<tr>
<td>Operational funding is a recurring line item and is supported by ongoing endowments.</td>
<td></td>
</tr>
<tr>
<td>The program has dedicated space in a location frequented by physics students.</td>
<td></td>
</tr>
</tbody>
</table>
1A: Institutional Climate and Support

1B: Reward Structure

1A-1 University-level support for STEM education

There is a strong institutional commitment to STEM teacher education, supported by policy, rewards, and financial resources.

1B-1 Promotion and tenure in physics teacher education

The PTE program has concrete support. Members of the PTE program spearhead the program, advocate for resources such as funding and personnel, and negotiate with the institution for changes beneficial to physics teacher education.

1B-2 Time for PTE program leaders to engage

Additionally, there is evidence that the PTE program leader(s) are granted modest time to engage in PTE activities.

1B-3 Recognition for PTE program team

The PTE team is celebrated, and there is evidence that there is frequent communication between physics and other units responsible for teacher education or licensure.

1B-4 Program space

Operational funding has been modest. External funding is less than $25K in the past three years. Additionally, there is evidence that there is little to no evidence of this support.

1C: Program Design

1C-1 Program space

Institutional funding is at least $100K/year. Operational funding has been substantial, and there is evidence that the PTE program is a point of pride for the institution, and consistently that teacher education is well aligned with teacher preparation.

1C-2 Stability of program operational funding

Institutional funding can include the portion of site leaders' salaries dedicated to PTE (beyond their normal duties), recruitment activities, Learning Assistant programs, scholarships, and a Teacher in Residence or Learning Assistant program. Except in rare cases, faculty salary would not be included, as this does not require dedication of PTE-focused funding.

1C-3 Program space

The institutional mission and/or strategic priorities historically granted but occurs on a part-based level. There is concrete evidence of this support.

1C-4 Stability of program operational funding

Institutional funding is at least $100K/year. Operational funding has been substantial, and there is evidence that the PTE program is a point of pride for the institution, and consistently that teacher education is well aligned with teacher preparation.

1C-5 Program space

Institutional funding is at least $100K/year. Operational funding has been substantial, and there is evidence that the PTE program is a point of pride for the institution, and consistently that teacher education is well aligned with teacher preparation.

PTEPA RUBRIC COMPONENTS:

1. How Strong Is Physics Teacher Education at Your Institution?
2. Are you recruiting students into the program?
3. How are STEM majors recruited into the program?
4. Is there an adequate pool of physics (and other STEM) majors, and do advising structures exist to refer them to the physics teacher education program?
5. Are there adequate resources to support the recruitment of STEM majors into the program?
6. Is there frequent communication between physics and other units responsible for teacher education or licensure?
7. Are faculty and staff in your physics department committed to physics teacher education?
8. Does your physics department have a designated professional development resource to work with pre-service and in-service teachers?
9. Are there successful strategies for retaining physics teachers?
10. How do you measure the success of your program?
Please send me your data!

- Contact me for a consent form and process for gathering reliable data.

- This will help us further establish validity, as well as give you more visuals of your results.

stephanie@chasteenconsulting.com
The PTEPA Rubric is a tool with many uses:

- Characterizes the practices and structures observed at thriving physics teacher education programs.*
- Provides a specific, objective, and reliable guide for physics teacher educators seeking to improve their programs.
- Supports research on physics teacher education programs.

What questions can the PTEPA Rubric help YOU answer?
Thank you!

You can also find me at: 
Stephanie@Chasteenconsulting.com

Special thanks to all the people who made this possible:

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