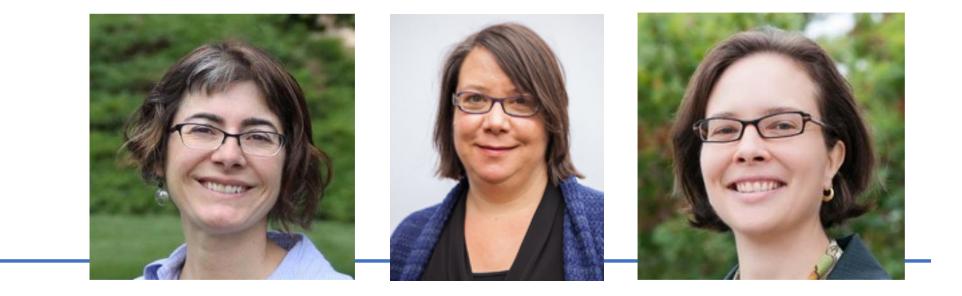
The Physics Teacher Education Program Analysis (PTEPA) Rubric

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PTEPA Rubric

Components

Standards and



Characterizes the practices and structures ulletobserved 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. •

phystec.org/thriving

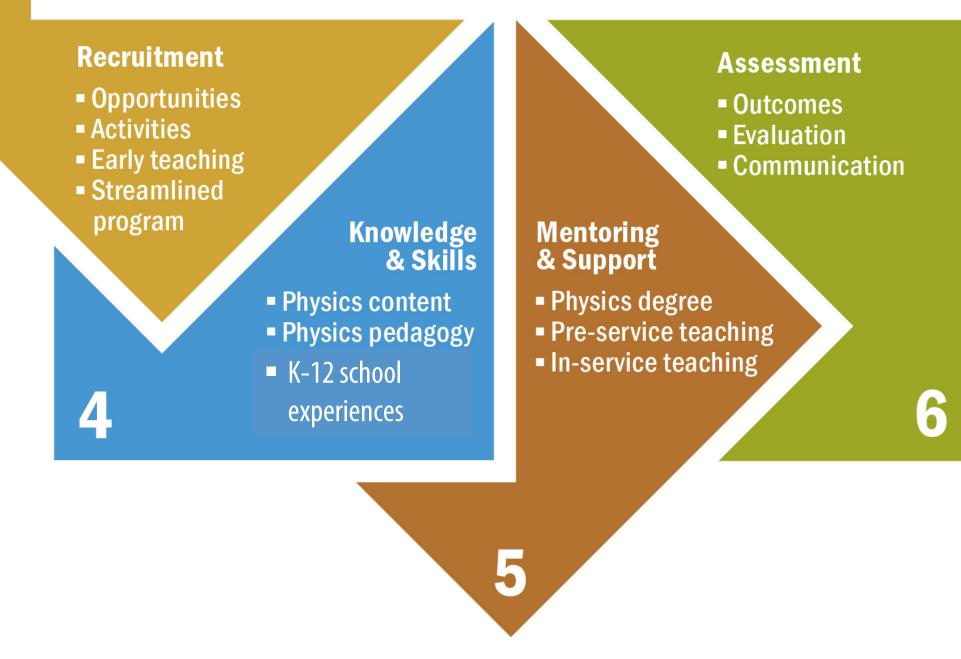
Recruitment Opportunities Activities

Leadership

Members

Attributes

Collaboration



Institutional

Commitment

Climate

Rewards

Resources

Sample from PTEPA Rubric – fixed version

Sample PTEPA Rubric results report

Your PTEPA Rubric Results

DEVELOPMENT OVERVIEW

Early drafts informed by existing instruments, especially:

- the Teacher Education Program Assessment (Coble et al, 2012)
- the PhysTEC Key Components (phystec.org/keycomponents)
- the report of the Task Force on Teacher Education in Physics (T-TEP) (Meltzer, Plisch, & Vokos, 2012)
- several reports on strong physics programs and career preparation

Shaped to represent what researchers observed at the eight diverse thriving* programs in the study:

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

	Possible attributes at	Possible attributes at	Possible attributes a
NP	Developing Level	Benchmark Level	Exemplary Level

2A: Program Team Members The program consists of a team^{1.2} whose members are in positions that enable effective leadership

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2A-1	PTE program leaders ¹ PREVALENT		Program leaders include at least one faculty member.	Program leaders include two faculty members.	Program leaders include three or more faculty members.
2A-2	PTE program team ² PREVALENT		Team consists of one person in addition to the leader(s).	Team consists of two people in addition to the leader(s).	Team consists of at least two people in addition to the leader(s), at least one of whom is a faculty member.
2A-3	Teacher in Residence (TIR) ³ PREVALENT		☐ There is a part-time physics TIR, or there is a science TIR (at any FTE).	☐ There is one FTE physics TIR.	There is more than one FTE physics TIR.
2A-4	Teacher Advisory Group (TAG) ⁴		There is a science TAG.	There is a physics TAG (significant physics teacher membership).	There is a physics TAG that is readily available for consultation by the PTE team.

Sample from PTEPA Rubric – interactive version

	The program has an effective leadership team, including effective colla A: Program Team Members	boration between	physics and education.			
e program con	isists of a team ^{1,2} whose members enable effective leadership.	NP	Possible attributes at Developing Level	Possible attributes at Benchmark Level	Possible attributes at Exemplary Level	Mor Informa Neede
2A-1	PTE program leaders ¹ PREVALENT	0	O Program leaders include at least one faculty member.	O Program leaders include two faculty members.	 Program leaders include three or more faculty members. 	0
2A-2	PTE program team ² PREVALENT	0	O Team consists of one person in addition to the leader(s).	O Team consists of two people in addition to the leader(s).	Team consists of at least two people in addition to the leader(s), at least one of whom is a faculty member.	0
2A-3	Teacher in Residence (TIR) ³ PREVALENT	0	There is a part-time physics TIR, or there is a science TIR (at any FTE).	O There is one FTE physics TIR.	O There is more than one FTE physics TIR.	0
2A-4	Teacher Advisory Group (TAG) ⁴	0	O There is a science TAG.	 There is a physics TAG (significant physics teacher membership). 	O There is a physics TAG that is readily available for consultation by the PTE team.	0

Explanation of item levels

Not present: Item is not present in the program.

Developing: The program performs better than a typical US institution of higher education on that item.

Benchmark: The program performs at a recommended level on that item.

Exemplary: The program is among the best-performing on that item.

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://phystec.org/thriving for more information on interpreting your results.

	NP		DEV	ELOPING	BENCHMARK		EXEMPL	ARY
ALL PTEPA STANDARDS			10%	22%	34%		34%	1
STANDARD 1: INSTITUTIONAL COMMITMENT				29%	36%		36%	
Component 1A: Institutional Climate and Support				17%	33%		50%	
Component 1B: Reward Structure					33%		67	1%
Component 1C: Resources			60%		40%			
STANDARD 2: LEADERSHIP AND COLLABORATION				19%	38%		43%	
Component 2A: Program Team Members			50%		50	0%		
Component 2B: Program Team Attributes					22%		78%	
Component 2C: Program Collaboration				25%	50	0%	25%	
STANDARD 3: RECRUITMENT		21%		32%	26%	21%		
Component 3A: Recruitment Opportunities				20%		60%		20%
Component 3B: Recruitment Activities	40%		60%					
Component 3C: Early Teaching Experiences for Recruiting Teacher Candidates		20%	4(0%	40%			
Component 3D: Streamlined and Accessible Program Options				25%	1	75%	l.	
STANDARD 4: KNOWLEDGE AND SKILLS FOR TEACHING PHYSICS				17%	33%		50%	
Component 4A: Physics Content Knowledge					i I	67%		33%
Component 4B: Pedagogy Courses and Curriculum			40	0%	20%	409	%	
Component 4C: Practical K–12 School Experiences					25%		75%	
STANDARD 5: MENTORING, COMMUNITY, AND PROFESSIONAL SUPPORT			27%	18%	36%		18%	
Component 5A: Mentoring and Community Support Toward a Physics Degree		12			50	0%		50%
Component 5B: Mentoring and Community Support Toward Becoming a Physics Teacher			4(0%	1	60%		
Component 5C: In-service Mentoring and Professional Community		75	%		25%	1		
STANDARD 6: PROGRAM ASSESSMENT				33%	33%		33%	
Component 6A: Program Outcomes					i i	75%		25%
Component 6B: Program Evaluation and Improvement			50%		50	0%		
Component 6C: Communication to Stakeholders			50%		25%	25%		

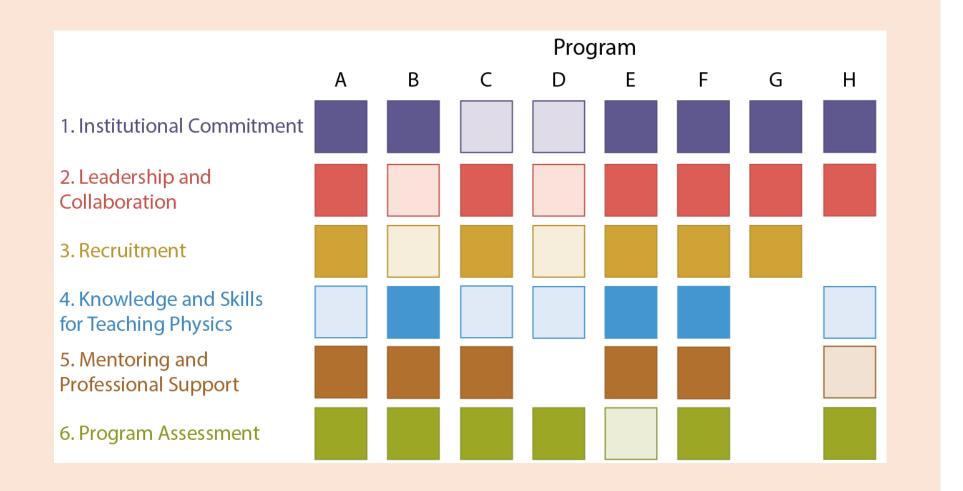
RECOMMENDATIONS FOR PHYSICS TEACHER EDUCATION PROGRAMS

- Complete the PTEPA Rubric
- Consider aligning features with thriving programs
- Engage in continuous improvement

QUESTIONS FOR RESEARCHERS

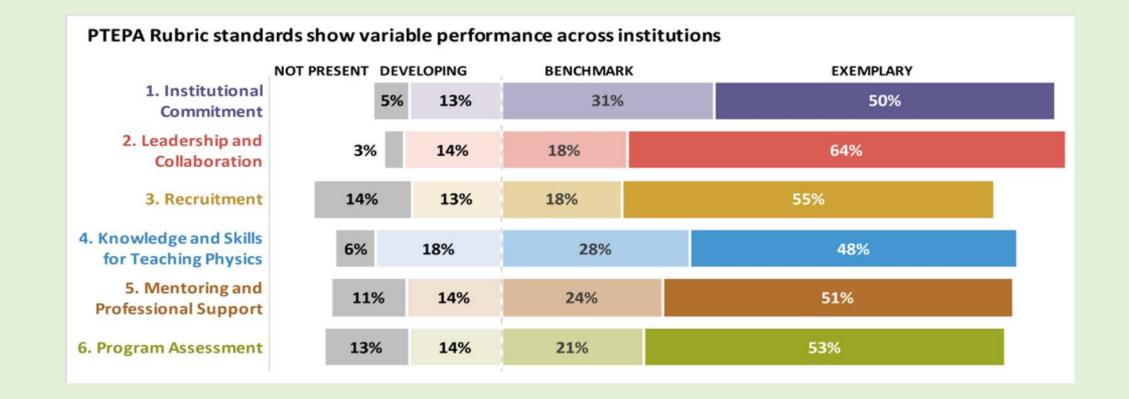


Thriving programs are strong in multiple PTEPA Rubric standards



* **Thriving programs** are defined as large-university programs that frequently graduate five or more physics teachers per year.

Thriving programs are most consistently strong in the first two PTEPA Rubric standards



What research questions could the **PTEPA Rubric help YOU answer?**

- Are different PTEPA Rubric results associated with different rates of physics teacher production?
- Does improving a program's PTEPA Rubric results lead to an increase in its number of teacher graduates?
- Are there missing elements in the PTEPA Rubric? \bullet
- Do certain elements of the PTEPA Rubric tend to appear together?
- Are there common patterns of PTEPA Rubric results?
- What should particular physics teacher education programs prioritize in order to support the highest possible teacher graduation rate?

Thriving programs are not strong on all items

	NOT PRESENT DEVELOPING		BENCHMARK	EXEMPLARY		
А	2% 9%		21%	68%		
E		6% 6%	23%	64%		
В	3%	16%	26%	55%		
rams	7	14%	14%	65%		
Programs E = 1	1	5% 10%	24%	51%		
D	7% 21%		36%	35%		
с	9% 21%	21%	21%	49%		
G	16% 20%		17%	47%		





