



# NCEES

**Examination:** Principles and Practice of Engineering (PE)  
**Report title:** Subject Matter Report by Major and Examination  
**Exams administered:** Jul 01 – Dec 31, 2021  
**Examinees included:** First-Time Examinees from EAC/ABET-Accredited Engineering Programs  
**Graduation Date:** Examinees testing more than 12 months after graduation date

Name of Institution:	University of Kentucky, Paducah		
Major:	Mechanical	PE Examination:	Mechanical: HVAC and Refrigeration

	Institution	ABET Comparator <sup>2</sup>
No. Examinees Taking <sup>1</sup>	1	393
No. Examinees Passing	0	292
Percent Examinees Passing	0%	74%

Uncertainty Range for Scaled Score <sup>4</sup> $\pm 1.00$
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	Number of Exam Questions	Institution Average Performance Index <sup>3</sup>	ABET Comparator Average Performance Index	ABET Comparator Standard Deviation	Ratio Score <sup>4</sup>	Scaled Score <sup>4</sup>
Principles: Basic Engineering Practice	4	8.9	10.3	3.4	0.86	-0.41
Principles: Thermodynamics	4	15.0	10.0	3.7	1.50	1.35
Principles: Psychrometrics	7	8.4	10.0	3.2	0.84	-0.50
Principles: Heat Transfer	6	8.4	10.3	3.1	0.82	-0.61
Principles: Fluid Mechanics	3	7.4	10.5	4.2	0.70	-0.74
Principles: Energy/Mass Balances	4	0.0	10.4	3.8	0.00	-2.74
Applications: Heating/Cooling Loads	7	6.3	10.1	3.1	0.62	-1.23
Applications: Equipment and Components	16	7.9	9.5	1.8	0.83	-0.89
Applications: Systems and Components	16	7.1	9.4	1.8	0.76	-1.28
Applications: Supportive Knowledge	3	7.4	10.6	3.9	0.70	-0.82

- 0 examinees have been removed from this data because they were flagged as a random guesser.
- Comparator includes all examinees from programs accredited by the ABET commission noted.
- Performance index is based on a 0–15 scale.
- These scores are made available for assessment purposes. See the NCEES publication entitled Using the FE as an Outcomes Assessment Tool at <https://ncees.org/education/outcomes-assessment/>.

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Name of Institution:	University of Kentucky, Paducah		
Major:	Mechanical	PE Examination:	Mechanical: Thermal and Fluid Systems

	Institution	ABET Comparator <sup>2</sup>
No. Examinees Taking <sup>1</sup>	1	281
No. Examinees Passing	1	189
Percent Examinees Passing	100%	67%

<b>Uncertainty Range for Scaled Score <sup>4</sup></b> $\pm 1.00$
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	Number of Exam Questions	Institution Average Performance Index <sup>3</sup>	ABET Comparator Average Performance Index	ABET Comparator Standard Deviation	Ratio Score <sup>4</sup>	Scaled Score <sup>4</sup>
Principles: Basic Engineering Practice	5	9.6	9.4	2.9	1.02	0.07
Principles: Fluid Mechanics	5	6.7	9.4	3.1	0.71	-0.87
Principles: Heat Transfer Principles	5	10.4	10.5	3.2	0.99	-0.03
Principles: Mass Balance Principles	4	10.5	9.5	3.6	1.11	0.28
Principles: Thermodynamics	5	7.7	9.2	3.0	0.84	-0.50
Principles: Supportive Knowledge	4	15.0	10.3	3.7	1.46	1.27
Hydraulic and Fluid Applications: Distribution Systems	8	15.0	9.3	2.2	1.61	2.59
Hydraulic and Fluid Applications: Hydraulic and Fluid Equipment	13	15.0	9.0	2.0	1.67	3.00
Energy/Power System Applications: Energy/Power Equipment	7	10.8	9.6	3.0	1.13	0.40
Energy/Power System Applications: Cooling/Heating	5	7.6	9.7	3.1	0.78	-0.68
Energy/Power System Applications: Energy Recovery	5	7.2	9.6	3.8	0.75	-0.63
Energy/Power System Applications: Combined Cycles	4	0.0	9.6	3.7	0.00	-2.59

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